

Forecast Evaluation Report September 2019

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Foreword

Uncertainty is an inescapable element of forecasting. Given the importance of our forecasts in Scotland's finances, it is essential that we critically evaluate our previous forecasts and look for ways of improving them in the future. Our approach to forecasting is never static, it needs to evolve as the world around us changes. Forecasting is an on-going process of intelligence-gathering, learning from previous forecasts, reflection and refinement.

In this report we have highlighted how forecasting errors tend to be largest for newly devolved taxes and benefits. Initial policy uncertainty contributed a significant amount to our early social security forecast errors. Additional policy information has led to an improvement in our social security forecasts. In some areas our first forecasts were made before any outturn data were available. The publication of a first outturn estimate has helped improve significantly our forecast accuracy, and this is particularly the case with income tax. To help continue to improve the data available to the Commission, we have published our second Statement of Data Needs alongside this report.

We would like to thank everyone who has contributed to this report and in particular those data providers who have worked hard to ensure we have the information we need to create our forecasts and evaluations. This includes the Scottish Government, Revenue Scotland, HMRC, DWP and the OBR.

Dame Susan Rice DBE

Professor Francis Breedon

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4 September 2019

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Summary

- 1 The Scottish Fiscal Commission's forecasts are used to set the Scottish Budget, so they must be accurate, independent, impartial and transparent. We hope this report helps others to better scrutinise our work and ensure that we are upholding our values. We welcome constructive criticism as it helps us to learn and improve our forecasts in future.
- 2 This report mainly evaluates forecasts of the 2018-19 financial year. For income tax, we evaluate 2017-18 as that is the latest year for which outturn data are available. For our economy forecasts we work in calendar years rather than financial years, so the forecast for 2018 is evaluated.
- 3 This is the first time we have evaluated our social security forecasts. It is also the first time the difference between the forecast of Scottish income tax revenue and the actual amount collected will affect the Scottish Budget. Chapter 2: 'Forecast evaluation and the 2020-21 Scottish Budget' explains how that process works.

Table 1: Summary of headline evaluations

| Forecast [1] | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Relative error (%) |
|----------------------------------|-------------------------|------------------------|----------------------|-----------------------|
| Economy – GDP growth [2] | | | | -0.7 |
| Income tax | 11,857 | 10,916 | 941 | 9 |
| Non-Domestic Rates [3] | 2,812 | 2,847 | -34 | -1 |
| Land & Buildings Transaction Tax | | | | |
| Residential | 305 | 262 | 42 | 16 |
| Additional Dwelling Supplement | 93 | 100 | -6 | -6 |
| Non-residential | 190 | 193 | -3 | -2 |
| Scottish Landfill Tax | 106 | 141 | -35 | -25 |
| Carer's Allowance | 265 | 152 | 113 | 74 |
| Carer's Allowance Supplement | 35 | 35 | 0 | 0 |
| Discretionary Housing Payments | 61 | 62 | -1 | -1 |
| Best Start Grant | 2 | 4 | -3 | -59 |
| Scottish Welfare Fund | 34 | 33 | 1 | 4 |
| Employability Services | 24 | 19 | 5 | 26 |
| Healthy Start Vouchers | 4 | 4 | 0 | 7 |

Source: Scottish Fiscal Commission

Figures may not sum because of rounding. Sources specific to each forecast are provided in the individual chapters.

[1] All forecasts evaluated are December 2017 forecasts of 2018-19, apart from Economy – GDP growth (December 2017 forecast of 2018), Income tax (February 2017 Scottish Government forecast of 2017-18), Best Start Grant (September 2018 forecast of 2018-19).

[2] For the Economy – GDP growth forecast, the error is in percentage points.

[3] Outturn figures are provisional based on notified returns from Local Authorities.

- 4 Forecasters call the difference between a forecast and the actual or final value a forecast error. A positive value means our forecast was higher and a negative value means our forecast was lower compared to the outturn, the actual or final value.
- 5 Forecast errors happen for many different reasons. Our judgements, our models and our forecast of the Scottish economy will all have contributed to some of the forecast errors. Factors beyond our control can also cause forecast errors, such as significant revisions to historic data, or unexpected changes in policy by the Scottish Government. These are all discussed in detail in this report.
- 6 The size of any forecast error can be presented in cash terms or in percentage terms, the latter referred to as the relative error. The taxes and benefits we forecast vary greatly in scale, so a one per cent error in our Non-Domestic Rates forecast has a cash value more than thirteen times that of a 59 per cent error in our Best Start Grant forecast.

- 7 The largest error in cash terms was in income tax, where the forecast overestimated the outturn by £941 million, or 9 per cent. We estimate around £820 million of this income tax forecast error was because of errors in estimates of the 2016-17 baseline year, which was only known about following the release of the first outturn data on Scottish income tax last summer.
- 8 The largest error in relative terms was in our Carer's Allowance forecast, which overestimated spending on the benefit by 74 per cent, or £113 million. Carer's Allowance was devolved part way through the year, while our December 2017 forecast had been based on spending for the full financial-year because the date of devolution was not available when we produced our forecast. Our forecast error would only have been 2.6 per cent, or £4 million, if we had known that devolution would not take place until September.
- 9 Throughout this report we offer comparisons with the Office of Budget Responsibility's (OBR) forecast errors to give some guide to previous forecast errors for similar taxes or benefits. However we would caution against direct comparisons to the OBR's forecast errors because UK-level data are often more recent, more extensive and of higher quality than Scottish data. Where taxes and benefits have been devolved recently, or are still to be devolved, data are not always available to produce forecasts with a similar level of certainty. Any forecaster would therefore expect a higher forecast error when first estimating Scottish taxes and benefits rather than their UK equivalents. In time, we will be able to analyse our forecast errors against our own past errors as well as OBR errors.
- 10 In this report we analyse both the size of the forecast errors and the reasons behind them. We find that the largest errors are for taxes or benefits which are newly devolved and where additional policy information or the first release of outturn data has altered our understanding of the expected level of revenue or spending. Forecasts produced since these initial data releases have generally proved to be more accurate.

Income tax, reconciliations and the 2020-21 Budget

- 11 The Scottish Government receives a Block Grant from the UK Government, determined by the Barnett formula. This is the funding the Scottish Government would have received had there been no devolution of tax or social security powers to Scotland.
- 12 The UK Government adjusts the Barnett-determined block grant by removing funding where the Scottish Government is now raising tax revenue and adding funding where the Scottish Government is responsible for paying social security. These are called Block Grant Adjustments (BGAs).
- 13 The Scottish Budget is set in advance of each financial year, based in part on forecasts. As information becomes available over time, the forecasts are

updated or aligned with outturn data. The Scottish Government’s funding is then adjusted in response to these changes. These changes in funding are called reconciliations. An explanation of BGAs, reconciliations and their effect on the 2020-21 Budget, can be found in Chapter 2.

- 14 Scotland’s income tax funding in the 2017-18 Scottish Budget was set using a forecast of Scottish income tax revenue in 2017-18 and a BGA based on forecasts by the OBR. The Scottish income tax forecast for 2017-18 was published by the Scottish Government in February 2017, before the establishment of the SFC in its current role. The SFC was required to assess that forecast at the time and found it to be reasonable.¹
- 15 In July 2019 HMRC published outturn data for 2017-18. We can now evaluate the 2017-18 Scottish Budget income tax forecasts against outturn, and see the size of the reconciliation resulting from differences between the original forecasts and the outturn data.
- 16 Table 2 compares the forecasts of the BGA and Scottish income tax to the outturn data.

Table 2: Scottish income tax and BGA, forecast and outturn, 2017-18

| £ million | Scottish income tax | BGA | Net effect on Budget |
|--|---------------------|---------|----------------------|
| Forecast | 11,857 | -11,750 | 107 |
| Outturn | 10,916 | -11,013 | -97 |
| Reconciliation – difference between outturn and forecast net effect on Budgets | | | -204 |

Source: Scottish Fiscal Commission, Scottish Government, HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)), Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)).
 Figures may not sum because of rounding.

- 17 The net effect of income tax on the Budget at the time the budget was initially set, based on forecasts, was £107 million. The outturn data shows that the net effect of income tax on the Budget is actually -£97 million. This leads to a reconciliation of -£204 million. We expect this reconciliation to be applied in the 2020-21 Scottish Budget, reducing the Scottish Budget by £204 million.
- 18 The first income tax outturn data published in summer 2018 resulted in a significant revision to understanding about the level of income tax collected in Scotland. This data revision makes interpreting the BGA and Scottish income tax forecasts more complicated. The first estimate of Scottish income tax published last year covered the 2016-17 financial year and is the starting point for calculating the BGAs. As it is the starting point the data revision equally effected the estimate of the BGA and Scottish income tax. We estimate that

¹ Scottish Fiscal Commission (2017) Supplementary Note for Budget 2017-18 ([link](#))

errors in the initial estimates of the 2016-17 baseline year affected both the BGA and Scottish income tax forecast by around £820 million in 2017-18, accounting for the majority of the forecast errors for 2017-18.

- 19 After adjusting for this 2016-17 baseline error, we find the BGA was slightly underestimated and Scottish income tax revenues were slightly overestimated. This in turn can be explained by total earnings in the UK growing slightly faster than the OBR's forecast, and Scottish total earnings growing slightly slower than forecast.
- 20 At the time the income tax forecasts were produced, the Scottish forecast was for growth in total earnings of around 2.6 per cent in 2017-18. The latest outturn data show growth of around 2.4 per cent. This slight difference in earnings growth contributed to an overestimate of growth in Scottish income tax revenues of around £90 million, though this is a minor component of the total forecast error of £941 million.

Economy forecasts

- 21 In December 2017, we forecast growth in GDP in 2018 of 0.7 per cent. The latest outturn data shows GDP growth in 2018 was 1.4 per cent, an error of 0.7 percentage points. As in our September 2018 Forecast Evaluation Report, we continue to attribute a significant proportion of our forecast error to large revisions to economic data published in August 2018.
- 22 We forecast growth in total earnings as part of our economy forecast, and this is also an important determinant in our income tax forecast. Despite errors in our headline forecast of GDP, we find that our forecasts of earnings and employment in 2018 were quite accurate, with an error in our forecast of total earnings from December 2017 of -0.1 percentage points. As a result, we do not expect our economy forecasts to contribute much to any income tax forecast error for 2018-19.

Tax forecasts

- 23 We have seen significant changes in estimates of Scottish income tax since our first forecast in December 2017. In December 2017, our estimates of Scottish income tax were based on a survey. In July 2018, outturn income tax data was published for Scotland for the first time. Now that we can base our forecasts on outturn data, our forecast accuracy has improved significantly. Our one-year ahead income tax forecast error has fallen from 5.1 per cent when forecasting 2016-17 to 0.8 per cent forecasting 2017-18.
- 24 This is the first year in which we are able to evaluate our one year ahead forecasts for Non-Domestic Rates (NDR), Land and Buildings Transaction Tax (LBTT) and Scottish Landfill Tax (SLfT). Our forecast errors for NDR and

LBTT in 2018-19 were of a scale comparable to the average historic error of the OBR for the equivalent UK taxes. The main source of error from NDR came from losses because of appeals and for LBTT from our residential forecast for transactions. Both were highlighted as likely sources of forecast error for these taxes in our 2018 Forecast Evaluation Report. Our SLfT forecast error was considerably higher than we expected mainly because of additional waste incineration capacity didn't come online as early as we had expected.

Social security forecasts

- 25 The total error on our social security forecasts is large at 38 per cent, or £116 million. This is almost entirely driven by Carer's Allowance having been devolved part way through the year, whereas our December 2017 forecast was based on spending for the full-year as the date of devolution was not available at the time we made our forecast. If we assess Carer's Allowance against a part-year version of the December forecast, derived by the same method as the corresponding Block Grant Adjustment, then the total error across all the social security forecasts we are assessing is 2 per cent, broadly in line with OBR's average one-year ahead error for Carer's Allowance.²
- 26 For the individual benefits we have a wide range of relative errors, from -59 per cent for Best Start Grant, through -0.1 per cent for Carer's Allowance Supplement, and up to 74 per cent for Carer's Allowance when assessed against the original full-year forecast. There is a number of reasons for these errors from which we can draw lessons for our future forecasts.
- 27 The large error on Carer's Allowance did not have any fiscal consequences in this case, as the Block Grant Adjustment was not calculated until later in 2018 when the timing of devolution was known. However, it does illustrate the potential scale of errors that can occur if our assumptions on the timing of devolution or the introduction of new benefits prove to be incorrect.
- 28 One of the main reasons for the -59 per cent relative error for the Best Start Grant (BSG) is because of take-up by claimants whose children were born before the December launch of the new benefit, many of whom we think were encouraged by publicity and social media campaigns to wait to claim BSG instead of its predecessor, Sure Start Maternity Grant. This shows that knowing how benefits are being promoted (whether by Social Security Scotland or other organisations or social media communities), and how claims will be made, can be just as important as the detail of the policy or the estimate of the eligible population. Based on the experience of the launch of

² Over half of the expenditure we are reviewing here is on Carer's Allowance or the Carer's Allowance supplement.

the Pregnancy and Baby Grant in 2018-19, we have subsequently revised our forecasts of the other Best Start Grant payments launched in 2019.

- 29 The Employability Services forecast had an error of 26 per cent. This is an area where so far we have relied on modelling by the Scottish Government, informed by their estimates of how many people would join Fair Start Scotland. By the time of our May 2018 forecast we had received detailed estimates from providers of how many job outcomes they would achieve, this improved information reduced the forecast errors of our subsequent forecasts. Expenditure has still been below our expectations and we will consider revising down our next forecast for Fair Start Scotland.



Chapter 1

Introduction

- 1.1 This report provides an evaluation of the Commission's recent forecasts. We publish our forecast evaluation report to:
- contribute to transparency around our forecasts
 - help others understand the likely degree of accuracy and limitations of our forecasts
 - learn lessons to improve our forecasts in future
 - aid understanding of the effect of our forecast errors on the Scottish Budget, including through reconciliations
- 1.2 For this year's report, and targeting the last of these objectives, we have added a new Chapter: 'Chapter 2 Forecast evaluation and the 2020-21 Scottish Budget'. This brings together information on our forecasts, Block Grant Adjustments (BGAs), reconciliations, and the effect of these on the upcoming 2020-21 Scottish Budget.
- 1.3 As with previous reports, we provide detailed evaluations of our forecasts, and in some places historic Scottish Government forecasts that the Commission assessed as reasonable. For the first time, we are also evaluating our social security forecasts.
- 1.4 Our December forecasts carry particular importance, given that the Scottish Budget is partly dependent on them. In this report, we primarily evaluate our forecasts of 2018-19, published in December 2017. We refer to these as our headline evaluations. For some areas, such as income tax, we evaluate a different forecast based on the data available.
- 1.5 This year we include some evaluations of our policy costings, produced to reflect Scottish Government policy changes. In some cases it is possible to provide a detailed evaluation while in other cases it is not possible to disentangle the policy costing from other factors. Further information on our

approach to policy costings is set out in the occasional paper on policy costings we have published.³

- 1.6 Alongside this report we are publishing our second annual Statement of Data Needs.⁴ As shown throughout this report, good data are critical to both creating our forecasts and evaluating them. In our Statement of Data Needs we set out a number of asks to those who supply us with data including the Scottish Government, HMRC, Revenue Scotland, Social Security Scotland and the Department for Work and Pensions (DWP).

Limitations of forecasting

- 1.7 The past is an imperfect guide to the future with rapid changes in the global economy, society, politics and technology. Analytical models, based on historic data and theory, can help provide some insight into how the economy and public sector finances may change over time, but all have limitations. Forecasts cannot perfectly predict the future – the Commission’s forecasts aim to present a balanced pathway through a broad range of possible outcomes.
- 1.8 Forecasting is an on-going process of intelligence gathering, learning from previous forecasts, reflection and refinement. Judgements will be made based on the best evidence and intelligence available at the time of publication, but may change from one forecast to the next as the economy evolves and our understanding develops along with it.

What is forecast error?

- 1.9 When we discuss forecast error, we simply mean the difference between our forecast and what actually happened. Given the challenges of forecasting, forecast errors are inevitable.
- 1.10 The existence of forecast error does not necessarily mean that the methodology used to produce the forecasts was flawed. A good forecasting methodology will draw on the best available data, use the best forecasting models and techniques, and have a robust methodology for applying judgement when this is needed to fill gaps in knowledge. However, the future cannot be known with certainty, and sometimes a sound forecasting method can produce a large forecast error because of unexpected changes in the world.
- 1.11 The likely forecast error will vary between different parts of our work. For example, earnings and therefore income tax revenues tend to be more stable than property transactions and LBTT revenues. This means that, over

³ Scottish Fiscal Commission (2019) Approach to Policy Costings – September 2019 ([link](#))

⁴ Scottish Fiscal Commission (2019) Statement of data needs – September 2019 ([link](#))

the longer term, we might expect relatively lower forecast errors in income tax than LBTT.

- 1.12 To help users understand what represents a reasonable forecast error in each section, we provide comparisons based on the OBR's forecasting record, as they produce similar forecasts to us.
- 1.13 Our aim is that, over the longer term, we can reduce our average forecast error by learning lessons from previous forecasts. There are many reasons forecasts may differ from outturn, including:
- **Data errors:** Sometimes, the data on which we base our forecasts are revised, or new data are released that were not previously available, and this can change our understanding. Had the new or revised data been available when we made our forecast, our forecast would have been different.
 - **Modelling errors:** We rely on a large number of models to create our forecasts. These generally rely on identifying trends in historical data, and use a combination of the historical patterns and some theory to predict how these trends will change over time. Sometimes, we may incorrectly identify historical trends, or misjudge how a trend might change in the future.
 - **Incorrect judgements:** Forecasting relies on a large number of judgements. This is often done when there is limited information or evidence on which to base a forecasting decision.
 - **Misunderstanding the impact of a known upcoming event:** There are certain events that we know will happen in the future that will affect our forecasts, with Brexit a prime example. We have to use a mixture of modelling and judgement to control for these events, but may still incorrectly predict the impact that the event will have on our forecasts and this would lead to error in our forecast.
 - **Unexpected events:** Some events simply cannot be predicted in advance in our forecasts, and we cannot control for them. For example, the Government may announce new policies after a given forecast was published. Other unexpected events may include unexpected severe weather events, natural disasters, or global political crises.
 - **Analytical mistakes and human error:** While we see simplicity as an asset in our models, some are necessarily large and complicated, such as our income tax model which projects income tax records of thousands of individual taxpayers. With such large models, mistakes

and human error are always possible. For example, coding errors, mistypes or incorrect cell referencing. We have quality assurance processes in place to minimise such errors and we have a process for reporting when such errors are discovered.⁵

- 1.14 Different categories of error require different actions to minimise the error in the future. For example, if we see that our error is because of modelling error, we would look at improving the way our models work. If the error was because of analytical mistakes, we would review and improve our internal quality assurance processes.
- 1.15 In some cases, particularly where our forecast error is because of fundamentally unpredictable changes, such as unexpected events, the actions we can take to reduce our forecast error are limited. In these cases, we can help our users by communicating the extent to which we may expect forecast errors in the future.
- 1.16 Where possible, we have tried to understand which categories have contributed to our forecast errors. However, in many cases our forecast errors will be a result of several overlapping reasons. We may not always be able to disentangle how different factors have contributed to our overall forecast error. Nevertheless, attempting to identify the sources of forecast error is an important first step in making future improvements.

Approach to evaluation

- 1.17 In this report we seek to assess the accuracy of our forecasts. This can be done in a number of ways.
- 1.18 Forecast error is simply the difference between a forecast and outturn data. The definitions below show how we calculate forecast error and relative forecast error.

Definition of forecast error

$$\text{Error} = \text{Forecast} - \text{Outturn}$$

Definition of relative forecast error

$$\text{Error} = (\text{Forecast} - \text{Outturn}) / \text{Outturn}$$

- 1.19 A positive forecast error means that our forecast overestimated the outturn data, while a negative forecast error means our forecast underestimated the outturn data. Relative forecast error is the percentage difference between our forecast and the outturn data.

⁵ Scottish Fiscal Commission (2018) Compliance with the Code of Practice for Official Statistics ([link](#)), section 'Approach to corrections and revisions'.

- 1.20 Typically, we compare the forecast error of our recent forecasts to historical forecast error. This provides an indication of how our current forecasts have performed relative to historic performance. There are a number of ways of measuring typical historic forecast error:
- **Average error:** This simply averages together historic errors. With this measure, positive error cancels out negative error. For example, a forecast with errors of +0.5 per cent and -0.5 per cent would have an average error of 0.0 per cent. This provides an indication of the statistical bias of a forecast.
 - **Average absolute error:** The absolute value, or magnitude, of all errors are averaged together. This provides an indication of the typical size of error of a forecast. A forecast with errors of +0.5 per cent and -0.5 per cent would have an average absolute error of 0.5 per cent.
- 1.21 In this report, where possible, we compare our recent forecasts to the average error and average absolute error from comparable OBR forecasts.

What are we not evaluating in this report

- 1.22 Not everything we currently forecast is being evaluated in this report. This is generally because we have a short forecasting history in some areas and there is limited or no outturn data to compare our forecasts to. We may be able to include more in our evaluation report next year.
- 1.23 We published our first forecast of assigned VAT in December 2018 based on data for 2016.
- 1.24 We previously expected VAT assignment to be implemented from 2020-21. On 15 May 2019 the Cabinet Secretary for Finance, Economy and Fair Work sent a letter to then Chief Secretary to the Treasury asking her "...to seriously consider the case for a delay to the implementation of VAT assignment and review the case at the time of the Fiscal Framework review".⁶
- 1.25 Because of a limited forecast history and availability of outturn data, and uncertainty over the timing of VAT assignment implementation, we decided not to include an evaluation of VAT assignment in this report. Even if VAT assignment implementation is delayed, we think it is still important to go through the process of producing data, forecasts and evaluations, and so we

⁶ Correspondence from Cabinet Secretary for Finance, Economy and Fair Work to Chief Secretary to the Treasury (2019) ([link](#)).

plan on including an evaluation of our VAT forecasts in our next Forecast Evaluation Report (FER).

- 1.26 We produce several illustrative forecasts which do not inform the Scottish Budget. Devolution of Air Passenger Duty (APD) has been delayed and our illustrative forecast is an estimate of the Scottish share of revenue raised. Although the Scottish Government, the ONS and HMRC publish estimates of the Scottish share of APD, these are not outturn data and there is variation in the estimated revenue. We continue to review the data in producing our illustrative forecasts but do not produce a formal evaluation.
- 1.27 Similarly we produce a number of illustrative forecasts of social security spending on benefits still reserved to the UK Government. This report only evaluates those benefits devolved to Scotland with the spending accounted for in the Scottish Budget.

Professional Standards

- 1.28 The Commission is committed to fulfilling our role as an Independent Fiscal Institution (IFI), in line with the principles set out by the Organisation for Economic Cooperation and Development (OECD) for these institutions.⁷
- 1.29 The Commission also seeks to adhere to the highest standards for analysis possible. While we do not produce official statistics, as we produce forecasts, the Commission and our work voluntarily comply as much as possible with the principles of the Code of Practice for Statistics.⁸

Comments & Contact

- 1.30 We welcome comments from users about the content and format of our publications.
- 1.31 All charts and tables in this publication have also been made available in spreadsheet form on our website.⁹ If you have any feedback, or would like to request further information about any of our analysis, please email info@fiscalcommission.scot or see the list of named contacts at the back of this publication.

⁷ OECD Recommendation on Principles for Independent Fiscal Institutions ([link](#))

⁸ Scottish Fiscal Commission (2018) Compliance with the Code of Practice for Official Statistics ([link](#))

⁹ Scottish Fiscal Commission (2019) Forecast Evaluation Report - September 2019 ([link](#))



Chapter 2

Forecast evaluation and the 2020-21 Scottish Budget

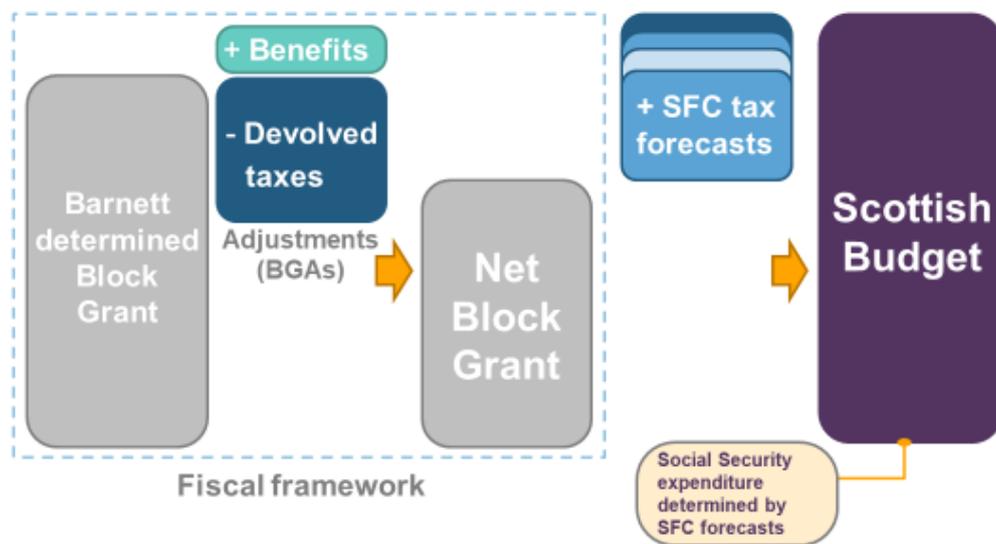
- 2.1 This chapter summarises how the data and evaluations presented in this report will affect the upcoming 2020-21 Scottish Budget. Scottish Budgets have to be adjusted for any differences between the forecasts on which the budget was set and the actual amount raised or spent, a process known as reconciliations. Our forecast accuracy therefore plays an important role in the reconciliation process.
- 2.2 In this chapter we:
- Explain how the Scottish Budget is set and the role of our forecasts
 - Provide a detailed explanation of the -£204 million income tax reconciliation that will be a feature of the 2020-21 Scottish Budget
 - Discuss the other reconciliations that will be a feature of the 2020-21 Scottish Budget

How is the Scottish Budget set?

- 2.3 The Scotland Act 2016 devolved a number of tax and social security powers to the Scottish Parliament. The corresponding Fiscal Framework Agreement changed the funding arrangements, fiscal rules and borrowing powers for the Scottish Government.¹⁰ As a result, the Scottish Budget has become more complex and variable. Figure 2.1 presents a stylised illustration of how the Scottish Budget is determined.

¹⁰ Scottish and UK Governments (2016) Fiscal framework: agreement between the Scottish and UK Governments ([link](#))

Figure 2.1: How is the Scottish Budget set?



Source: Scottish Fiscal Commission

- 2.4 The Scottish Government receives a Block Grant from the UK Government, determined by the Barnett formula. This is the funding the Scottish Government would have received had there been no devolution of tax or social security powers to Scotland.
- 2.5 The UK Government adjusts the Barnett-determined block grant by removing funding where the Scottish Government is now raising tax revenue and adding funding where the Scottish Government is responsible for paying social security. These are called Block Grant Adjustments (BGAs).
- 2.6 The BGAs reflect the hypothetical amounts that would have been raised or spent in Scotland if the taxes or benefits had not been devolved. They are based on revenues or spending in Scotland the year before devolution, and then adjusted in line with forecasts of increases in revenue or spending per head in the rest of the UK. To calculate the BGAs, the UK and Scottish Governments consider OBR forecasts of the corresponding rUK tax or benefit, and projected population growth in each country.
- 2.7 Application of the BGAs to the Barnett-determined Block Grant results in a Net Block Grant which is transferred to the Scottish Government for the upcoming financial year. The Scottish Government adds our tax forecasts to determine the funding for the Scottish Budget. This results in the estimated amount the Scottish Government has to spend in a year, without considering any borrowing or use of the Scotland Reserve.

- 2.8 Our social security forecasts determine how much of the Budget is allocated to social security spending. The Scottish Government is responsible for allocating the remaining funding to other areas of spending.
- 2.9 The Scottish Budget is set in advance of each financial year, based on forecasts. As information becomes available over time, the forecasts are updated or aligned with outturn data. The Scottish Government then adjusts its funding in response to these changes. These changes in funding are called reconciliations.
- 2.10 Reconciliations can be applied in-year or as adjustments to future Budgets, increasing the volatility of the Scottish Government’s funding. Because reconciliations result from the differences between forecasts and outturn (forecast error), the variability of the Scottish Government’s funding depends on the accuracy of our and the OBR’s forecasts.

Income Tax

How do income tax reconciliations work?

- 2.11 For the first time, the Scottish Government will have an income tax reconciliation applied to their Budget. The reconciliation of -£204 million relates to 2017-18 and will be applied in 2020-21.
- 2.12 The 2017-18 Budget was set in February 2017. OBR forecasts were used to set the income tax BGA and the Scottish Government forecast the amount of Scottish income tax expected to be raised. Outturn data from HMRC for 2017-18 became available in July 2019; and the resulting reconciliation will be included in the 2020-21 Budget.
- 2.13 There are two ways we can present income tax reconciliations. Both approaches are focused on forecast error and both give the same reconciliation amount and we have included the two options here to help understanding. The two approaches to presenting reconciliations are summarised in Tables 2.1 and 2.2.

Table 2.1: Scottish income tax and BGA, forecast and outturn

| £ million | Scottish income tax | BGA | Net effect on Budget |
|--|---------------------|---------|----------------------|
| Forecast | 11,857 | -11,750 | 107 |
| Outturn | 10,916 | -11,013 | -97 |
| Reconciliation – difference between outturn and forecast net effect on Budgets | | | -204 |

Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income tax policy forecasts – February 2017 ([link](#)), HMRC (2019) Scottish income tax outturn statistics ([link](#)).
 Figures may not sum because of rounding.

Table 2.2: Income tax final reconciliation for 2017-18

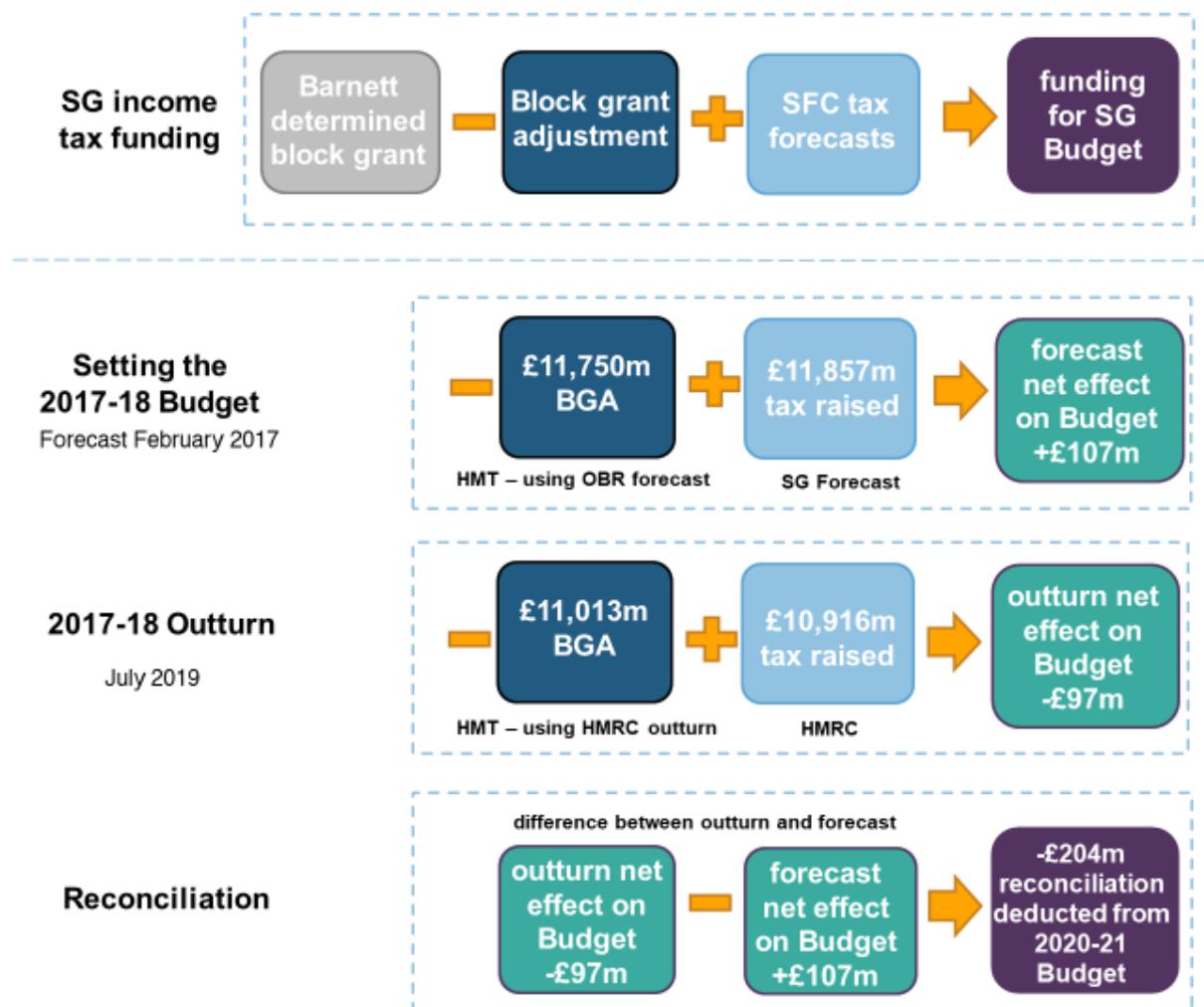
| £ million | Scottish income tax error | BGA error | Reconciliation |
|------------|---------------------------|-----------|----------------|
| Income tax | -941 | 737 | -204 |

Source: Scottish Fiscal Commission

Note: errors are presented as positive or negative depending on their effect on the Scottish Government's funding.

2.14 The first way of calculating reconciliations is by considering the forecast error in funding for the Scottish Budget. The income tax BGA is the amount removed from the Block Grant now income tax is devolved. The tax raised is the amount of Scottish income tax collected. Comparing the BGA with revenue gives an estimate of the net effect on Budget. Figure 2.2 below presents the 2017-18 income tax reconciliation in this way.

Figure 2.2: 2017-18 income tax reconciliation



Source: Scottish Fiscal Commission

Note: The Scottish Government provided the forecast for income tax in February 2017, which we assessed as reasonable. Future years will use SFC rather than SG forecasts.

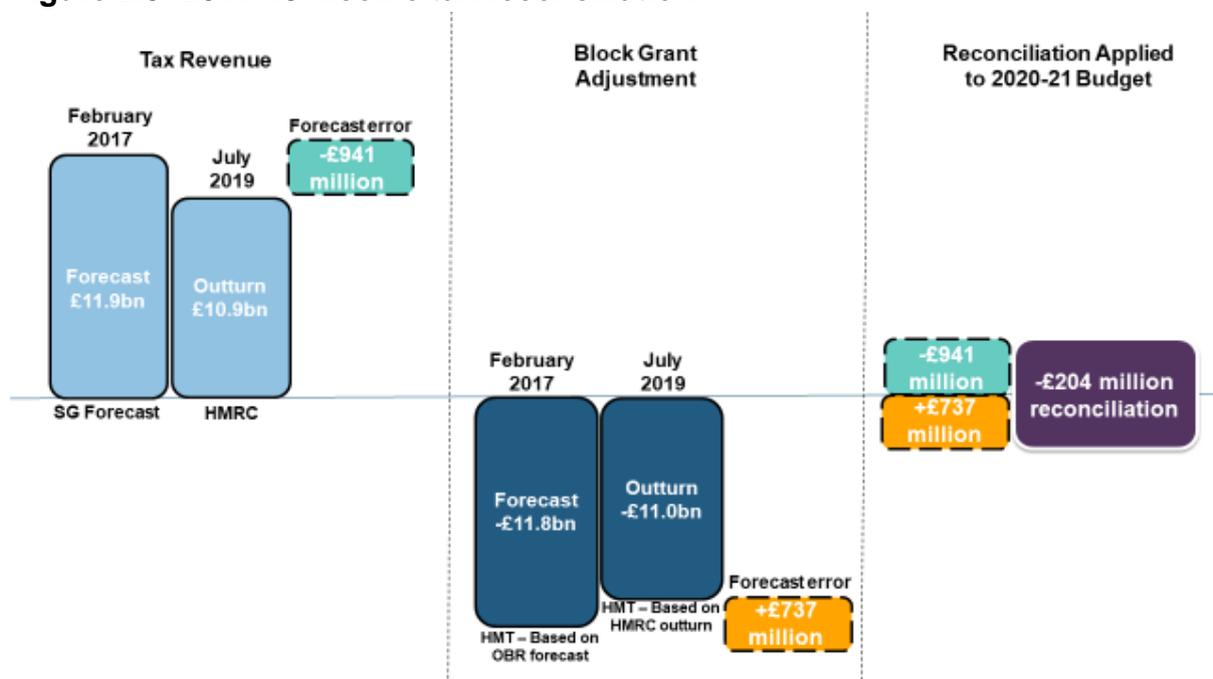
2.15 In February 2017, the forecast net effect on Budget was £107 million. This means the Scottish Government expected to raise £107 million more than would be removed by the BGA. This extra revenue was included in the 2017-18 Budget. In July 2019, outturn information showed the net effect on Budget was -£97 million. This means the BGA removed £97 million more than was raised in income tax. Taking the funding down from +£107 million to -£97 million results in a -£204 million reconciliation which will be applied to the next Budget, 2020-21.

2.16 The second way to consider income tax reconciliations is by focusing separately on the forecast errors for the revenue and the BGA:

- £941 million less revenue was raised than expected, which means the Scottish Budget should have been £941 million smaller.
- The BGA was £737 million less than expected, which means too much money was removed from the Barnett-determined Block Grant back in 2017 so the Scottish Government’s Budget should have been £737 million larger.
- Considering the funding effect of both errors together results in a -£204 million reconciliation.

2.17 Figure 2.3 describes the 2017-18 income tax reconciliation.

Figure 2.3: 2017-18 income tax reconciliation



Source: Scottish Fiscal Commission

2.18 The 2017-18 income tax reconciliation is the first income tax reconciliation to be applied to a Scottish Budget. Scottish income tax outturn information will

now become available each summer, and each data release will result in an income tax reconciliation which will be applied to the following Scottish Budget. This creates an ongoing reconciliation process which will apply each financial year.

Evaluating the 2017-18 income tax forecasts

2.19 This section evaluates the BGA and Scottish income tax forecasts that led to the reconciliation of -£204 million. The BGA was based on forecasts by the OBR. The Scottish income tax forecast for 2017-18 was published by the Scottish Government in February 2017, before the establishment of the SFC in its current role. The SFC at the time found the Scottish Government's forecast to be reasonable.

2.20 In summary we find that:

- The large headline forecast errors in the BGA and Scottish income tax forecasts of £737 million and £941 million respectively can mostly be explained by a data revision following the publication of the first income tax outturn data in July 2018. These new data equally affected the BGA and Scottish income tax forecasts and therefore have no net effect on the Scottish Budget or income tax reconciliations.
- The reconciliation of -£204 million can be explained by slightly faster than expected growth in earnings in the rest of the UK and slightly slower than expected growth in earnings in Scotland. The scale of this reconciliation and associated forecast errors are moderate in the context of income tax.

2.21 Before July 2018, estimates and forecasts of Scottish income tax were based on the Survey of Personal Incomes (SPI), a sample of UK income tax records.¹¹ In July 2018, HMRC published for the first time Scottish outturn income tax data, primarily based on administrative data. These new HMRC outturn data show income tax revenues in Scotland in the 2016-17 baseline year had been overestimated using the SPI. We estimate the 2016-17 baseline error reduced both the BGA and Scottish income tax forecast by around £820 million in 2017-18, accounting for most of the total forecast errors.

2.22 As the 2016-17 baseline error is an equal component of both the BGA and Scottish income tax, it has no net effect on the 2017-18 reconciliation or the Scottish Budget. As it affects the both level of the BGA and Scottish income

¹¹ The Survey of Personal Incomes is based on administrative information held by HMRC about people liable for UK income tax. More information about the survey can be found in HMRC (2019) Personal incomes statistics ([link](#)).

tax in 2017-18, it does make interpreting the 2017-18 forecast errors more complicated.

2.23 Table 2.3 shows the BGA and Scottish income tax forecasts for 2017-18 after adjusting by £820 million to account for the new data release.

Table 2.3: 2017-18 BGA and Scottish income tax forecast error, accounting for new data release

| £ million | Scottish income tax | BGA | Reconciliation |
|-------------------|---------------------|---------|----------------|
| Adjusted forecast | 11,037 | -10,930 | |
| Outturn | 10,916 | -11,013 | |
| Error | -121 | -83 | -204 |

Source: Scottish Fiscal Commission, HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)).

Note: errors are presented as positive or negative depending on their effect on the Scottish Government's funding.

2.24 Table 2.3 shows that, after adjusting for the 2016-17 baseline error, the OBR's forecast led to a slight underestimate of the BGA, by around £83 million. In comparison, the Scottish forecast slightly overestimated Scottish income tax in 2017-18, by around £121 million. These errors are around 1.0 per cent of Scottish income tax revenue and are relatively small in the context of income tax forecasting errors.

2.25 To evaluate why these forecast errors have occurred, we compare the Scottish Government and OBR's forecasts of Non Saving Non Dividend (NSND) income tax growth in Scotland and the rest of the UK (rUK) respectively with outturn.

Table 2.4: Growth rates of 2017-18 BGA and Scottish income tax, accounting for new data release

| Per cent growth | Scottish NSND income tax (SG) | rUK NSND income tax (OBR) | Difference |
|-----------------|-------------------------------|---------------------------|------------|
| Forecast | 2.9 | 2.3 | 0.6 |
| Outturn | 1.8 | 3.0 | -1.2 |
| Error | 1.0 | -0.7 | |

Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)), OBR (2016) Supplementary forecast information release – Devolved tax forecasts ([link](#)).

Figures may not sum because of rounding.

2.26 Scottish income tax revenue was forecast to grow 0.6 percentage points more than income tax revenue in the rest of the UK. The Scottish forecast slightly overestimated growth in Scottish NSND income tax revenue, while the OBR slightly underestimated growth in rUK NSND income tax revenue. The outturn data show Scottish income tax revenue grew 1.2 percentage points less than revenue in the rest of the UK.

2.27 A number of different factors may cause a forecast error. Table 2.5 summarises some key economic determinants from the UK and Scottish forecasts from November 2016 and February 2017, which may explain part of the two forecast errors.

Table 2.5: Forecast and outturn growth in income tax economic determinants Scotland and UK, 2017-18

| Per cent growth | Determinant | Forecast | Outturn | Error (%) |
|----------------------|------------------|----------|---------|-----------|
| Scotland (SG) | Employment | 0.3 | 1.5 | -1.2 |
| | Average earnings | 2.3 | 1.0 | 1.3 |
| | Total earnings | 2.6 | 2.4 | 0.2 |
| UK (OBR) | Employment | 0.1 | 1.0 | -0.9 |
| | Average earnings | 2.4 | 2.7 | -0.3 |
| | Total earnings | 2.5 | 4.0 | -1.4 |

Source: Scottish Government (2016) Scotland's Budget: Draft Budget 2017-2018 ([link](#)), OBR (2016) Economic and Fiscal Outlook – November 2016 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), OBR (2019) Economic and fiscal outlook – March 2019 ([link](#)).

Figures may not sum because of rounding.

2.28 The Scottish Government underestimated growth in employment but overestimated growth in average earnings. These two errors partially offset each other, and overall we find that the Scottish forecast only slightly overestimated growth in total earnings by around 0.2 percentage points. While the Scottish forecast slightly overestimated growth in total earnings, the OBR had a larger underestimate of growth in UK total earnings.

2.29 The errors in the economic determinants forecasts in Table 2.5 mirror the errors in the income tax and BGA forecasts. However, the relative scale of the errors don't quite match. The OBR had a bigger error in its economic determinant forecasts, but a smaller error in its rUK income tax forecast. This may be explained in part by the availability of more timely UK tax data.

2.30 We have focussed on providing an evaluation of the Scottish income tax forecasts. The OBR will be providing their own evaluation of their BGA determining rUK income tax forecasts, due to be published shortly after this report.

2.31 In Chapter 3 we provide a more detailed explanation of the February 2017 forecast error of 2017-18. This is summarised in Table 2.6.

Table 2.6: Disaggregation of 2017-18 forecast error

| £ million | |
|------------------------|--------|
| SG February 2017 | 11,857 |
| 2016-17 baseline error | -820 |
| Economic forecast | -91 |
| Other | -30 |
| HMRC Outturn July 2019 | 10,916 |

Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)).
Figures may not sum because of rounding.

2.32 Table 2.3 showed a forecast error of -£121 million after controlling for the 2016-17 baseline error. As shown in Table 2.6, slightly slower than expected growth in total earnings is estimated to contribute around -£91 million to the 2017-18 Scottish income tax forecast error.

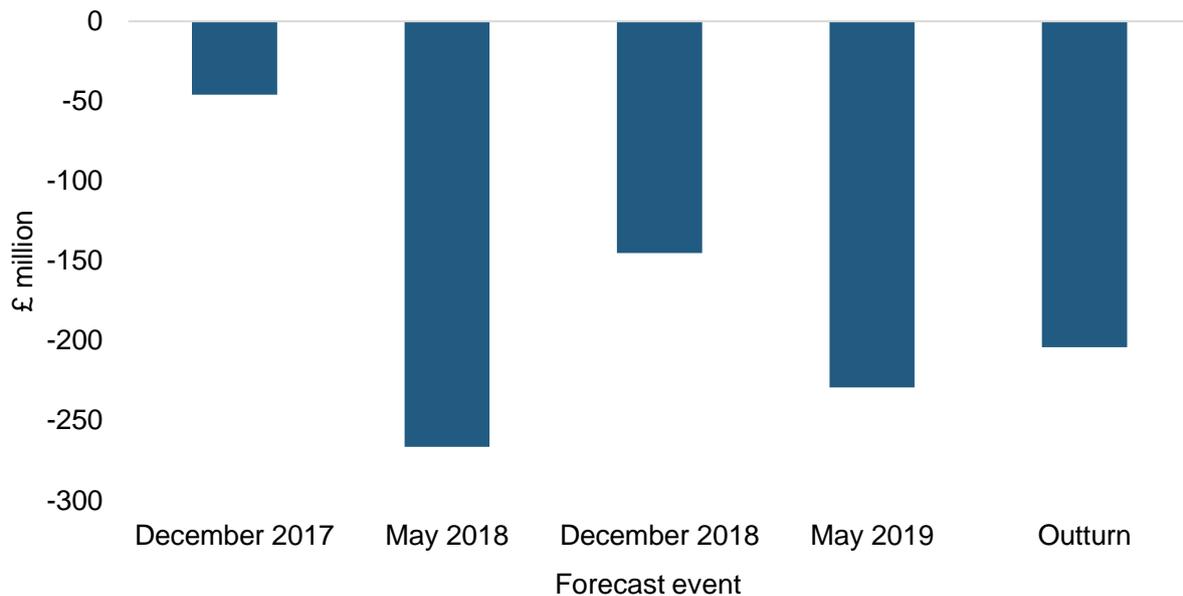
Evaluating our forecasts of income tax reconciliations

2.33 After the Budget has been set but before the publication of outturn data, we provide estimates of income tax reconciliations based on the latest forecasts. As income tax reconciliations are the net result of forecasting errors by two separate organisations, there is a significant degree of uncertainty around these estimates.

2.34 It will be important to know how much confidence we can have in our estimates of reconciliations. While we'll need several years of data to form a full picture, in this section we consider the accuracy of our estimates of the 2017-18 reconciliation.

2.35 Figure 2.4 shows how estimates of the income tax reconciliation for 2017-18 have developed over time.

Figure 2.4: Estimates of income tax reconciliations for 2017-18 at previous forecasts



Source: Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), Scottish Fiscal Commission (2017) Scotland’s Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland’s Economic and Fiscal Forecasts – May 2019 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)).

2.36 Figure 2.4 shows the estimated reconciliation for 2017-18 from each of our forecasts. We have been anticipating a negative reconciliation for 2017-18 since our first income tax forecast, and our estimates of the reconciliation have moved closer with each publication. Our latest forecast in May 2019 anticipated a reconciliation for 2017-18 of -£229 million, close to the outturn figure.

2.37 In May 2018, 14 months ahead of the publication of outturn data, we published an estimate of the reconciliation for 2017-18 of -£267 million, an error of £62 million or around 30 per cent.

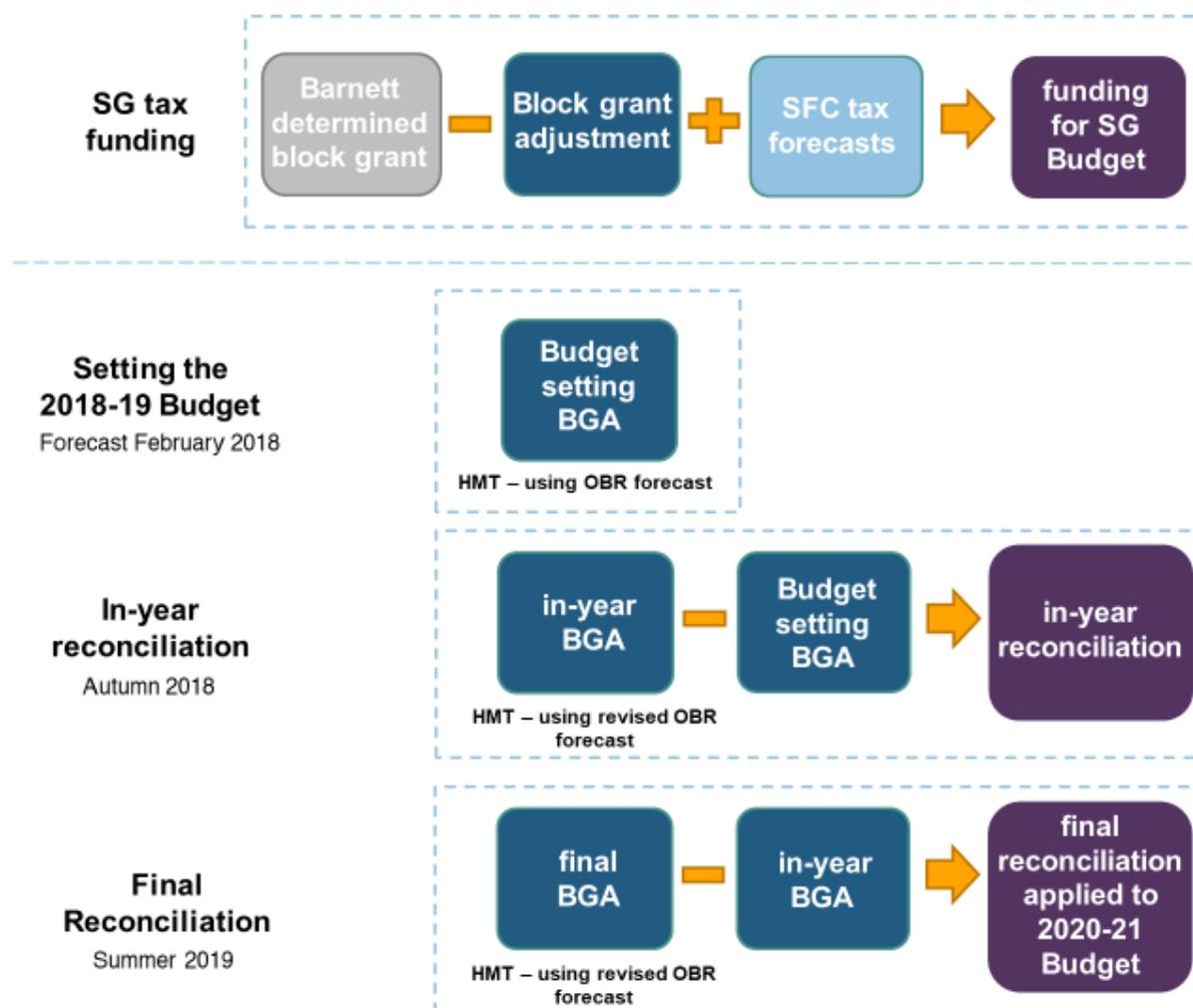
2.38 In May 2019, we estimated a reconciliation for 2018-19 of -£608 million. As an illustration, applying the same relative reconciliation estimate error from May 2018 of the 2017-18 figure of 30 per cent, we might expect the final reconciliation figure for 2018-19 to be somewhere between -£466 million and -£875 million. This range should be interpreted with caution as it is based on a single experience of reconciliations so far. Over time, we’ll be able to build a better picture of the relationship between interim estimates of reconciliations and the final reconciliations.

Fully devolved taxes and benefits

How do fully devolved tax and benefits reconciliations work?

2.39 Fully devolved taxes have a two-step reconciliation process, shown in Figure 2.5, which is different to the process for income tax.

Figure 2.5: 2018-19 Fully devolved tax reconciliations



Source: Scottish Fiscal Commission

2.40 Social security reconciliations follow the same process as fully devolved tax reconciliations. The key difference is that social security BGAs are positive, because they add money to the Scottish Budget to allow the Scottish Government to pay benefit recipients, which previously was done by the UK Government.

2.41 Reconciliations for fully devolved taxes and benefits are based only on the BGAs. This is because the Scottish Government manages any difference between the forecast and actual tax raised within their Budget as it occurs. This means our forecast is not a part of this reconciliation process.

- 2.42 At the Autumn Budget of the financial year in question, the OBR release updated forecasts. Using the updated forecasts, the BGAs are revised, which we call in-year BGAs. For example, the BGAs for financial year 2018-19 were revised at the 2018 Autumn Budget. Any funding differences between the Budget-setting and in-year BGAs are called in-year reconciliations and applied during the financial year.
- 2.43 Once the financial year has concluded, outturn information becomes available. Using outturn information, a final BGA is calculated. Any funding differences between the final BGA and the in-year BGA is called a final reconciliation and is applied to the subsequent Budget.
- 2.44 This process means each financial year will have two reconciliations for each fully devolved tax and benefit: one final reconciliation for two years prior and one in-year reconciliation to reflect the updated forecasts at the Autumn Budget.

Summary of 2020-21 reconciliations

- 2.45 As a consequence of the fiscal framework process the 2020-21 Scottish Budget will be affected by the following reconciliations:¹²
- 2017-18 income tax final reconciliation
 - 2018-19 fully devolved taxes and social security final reconciliations
 - 2020-21 in-year reconciliations for fully devolved taxes and social security
- 2.46 Of these reconciliations, we know the income tax figure of -£204 million. We expect the 2018-19 fully devolved taxes and social security final reconciliations to be published in September 2019. 2020-21 in-year reconciliations will not be known until after the 2020 Autumn Budget.
- 2.47 The importance of this reconciliation process is becoming increasingly clear. The devolution of further social security powers in 2020-21 means we will see a significant number of new reconciliations, starting with in-year reconciliations in 2020-21.
- 2.48 Reconciliations are incurred as a result of forecast error, which highlights the increasing importance of the SFC and OBR forecasts when considering the Scottish Budget.

¹² There will also be a reconciliation for income from fines, forfeitures and fixed penalties in 2020-21, relating to income from 2018-19. This not included in this document as the SFC is not responsible for forecasting this income.

Borrowing

Resource Borrowing

2.49 Resource borrowing can be used up to an annual limit of £300 million for forecast error, including reconciliations. The Scottish Government has not used its resource borrowing powers to date. The Scottish Government may choose to borrow at the 2020-21 Budget, to cover the anticipated reconciliations. Alternatively, the Scottish Government could manage the reconciliations using the Scotland Reserve or through altering spending plans. Detailed discussion of the Scottish Government's resource borrowing powers and current use of the Scotland Reserve can be found in our May publication.¹³

Capital Borrowing

2.50 We assessed the Scottish Government's projections of their 2018-19 capital borrowing plans as reasonable. The Government initially planned to borrow £450 million, the maximum allowed under the fiscal framework. The Scottish Government actually borrowed £250 million in 2018-19. The lower than planned capital borrowing in 2018-19 illustrates that actual borrowing levels may be lower than projected, should the Scottish Government borrow less than planned in future years.

¹³ Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#))



Chapter 3

Economy

Headline forecast error

3.1 In this chapter we focus on our forecasts of the Scottish economy for the calendar year 2018. In particular we look back at our first ever forecast from December 2017 of the year ahead. Table 3.1 shows the error in our December 2017 forecast of growth in GDP in 2018.

Table 3.1: Headline evaluation – one-year ahead forecast of GDP growth in 2018

| Forecast (%) | Outturn (%) | Error (percentage points) |
|--|-------------|---------------------------|
| 0.7 | 1.4 | -0.7 |
| Historic averages from HMT and OBR¹⁴ | | |
| Average error | | 0.1 |
| Average absolute error | | 1.0 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government (2019) Quarterly National Accounts Scotland 2019 Quarter 1 ([link](#)), OBR (2019) Historical official forecasts database ([link](#)).

Figures may not sum because of rounding.

3.2 In December 2017 we forecast growth in GDP in Scotland of 0.7 per cent in 2018. The latest outturn estimates show growth of 1.4 per cent in 2018, a forecast error of -0.7 percentage points.

3.3 The average absolute one-year ahead forecast error in UK GDP forecasts by HMT and OBR is 1.0 per cent. Our forecast error for 2018 is lower than this UK average, and within expected ranges.

3.4 The first outturn estimate of growth in GDP for the whole of 2018 was published in May 2019 and included in our May 2019 forecast. Table 3.2 shows how our forecast of 2018 developed over time.

¹⁴ These averages include HM Treasury (HMT) budget forecasts from 1983 to 2010 and OBR forecasts from 2010. The values are calculated from the OBR's historical official forecasts database.

Table 3.2: Summary of previous 2018 GDP forecasts

| Forecast | Forecast classification | Forecast (%) | Error (percentage points) |
|---------------|-------------------------|--------------|---------------------------|
| December 2017 | One-year ahead | 0.7 | -0.7 |
| May 2018 | In-year | 0.7 | -0.7 |
| December 2018 | In-year | 1.4 | 0.0 |
| May 2019 | Outturn | 1.4 | 0.0 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Government (2019) Quarterly National Accounts Scotland 2019 Quarter 1 ([link](#)).

These 2018 GDP growth forecasts are based on the Economy Supplementary Tables published on our website at each forecast. The May 2019 figure may differ slightly from outturn as available at time of publication.

3.5 As Table 3.2 shows, in May 2018 we retained our December 2017 forecast of 0.7 per cent. By December 2018, on the basis of partial outturn data up to the second quarter, we revised our forecast up to 1.4 per cent, reducing our forecast error to 0.0 percentage points.

Understanding our forecast error

3.6 In our Forecast Evaluation Report 2018 we discussed the effect on our 2017-18 forecasts of significant revisions to GDP data, driven by revisions to estimates of construction industry activity. This issue also affected our forecasts of 2018.¹⁵ The available data and our forecasts are shown in Table 3.3.

Table 3.3: Outturn data and forecasts of growth in GDP

| Per cent growth | Dec 2017 [1] | May 2018 | Dec 2018 | May 2019 |
|-----------------|--------------|----------|----------|----------|
| 2017 | 0.7 | 0.7 | 1.3 | 1.5 |
| 2018 | 0.7 | 0.7 | 1.4 | 1.4 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)).

Shaded cells refer to outturn. These figures are based on the Economy Supplementary Tables published on our website at each forecast and may differ slightly from outturn as available at time of publication.

[1] The December 2017 estimate of growth for 2017 was based on published outturn data for 2017 Q1 to Q3 and a forecast of growth in 2017 Q4.

3.7 When we published our December 2017 forecast, we estimated growth in 2017 of 0.7 per cent, based on partial outturn data. By our May 2018 forecast, the first outturn estimate of growth in 2017 had been published, which was close to our forecast of 0.7 per cent. On the basis of slow growth in 2017, and

¹⁵ A detailed analysis of data revisions and their implications for our economy forecasts is provided in the previous edition of this report: Scottish Fiscal Commission (2018) Forecast Evaluation Report ([link](#)).

concerns about the broader outlook for the Scottish economy, we forecast growth of 0.7 per cent in 2018 in our December 2017 and May 2018 forecasts.

3.8 Estimated GDP growth for 2017 was revised up to 1.3 per cent in August 2018. This was primarily because of significant revisions to estimates of construction industry activity. Once outturn data for 2017 had been revised up, this also led us to revise up our outlook for 2018. It is likely that, had we had the revised figures for 2017 when we published our December 2017 forecast, we would have forecast higher growth in 2018.

3.9 Table 3.4 looks at the 2018 forecast error in some of the elements within the economy forecast that affect our fiscal forecasts.

Table 3.4: December 2017 forecast error in key economic determinants for 2018

| | Forecast (%) | Outturn (%) | Error (percentage points) |
|------------------|--------------|-------------|---------------------------|
| Employment | 0.6 | 0.3 | 0.3 |
| Average earnings | 2.2 | 2.6 | -0.4 |
| Total earnings | 2.7 | 2.8 | -0.1 |
| Consumption | 0.5 | 0.4 | 0.1 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)).

Figures may not sum because of rounding.

3.10 In December 2017, we overestimated growth in employment for 2018 and underestimated growth in average earnings. These two errors partially offset each other in our forecast of total earnings growth for 2018, where there was only a slight underestimate of -0.1 percentage points.

3.11 In the income tax chapter, and particularly in Table 4.6, we look at these key economic determinants for the financial year 2017-18. Growth in total earnings is the most important economic determinant in our income tax forecast. Table 4.6 shows the error in total earnings growth for 2017-18 was small and did not have a significant effect on the error in the February 2017 Scottish Government income tax forecast of 2017-18.

3.12 A similar finding, but for 2018-19 income tax, can be drawn from the 2018 economic determinants in Table 3.4, although income tax outturn data for 2018-19 are not yet available. As our forecast error for 2018 total earnings growth is small, we do not expect our underestimate of 2018 GDP growth to have a significant effect on our income tax error for 2018-19.

3.13 The relationship between growth in GDP, employment and total earnings is complicated, and these economic factors may at times move in different directions. Despite a larger error in our forecast of GDP of -0.7 percentage points, our forecast of total earnings for 2018 appears to be significantly more

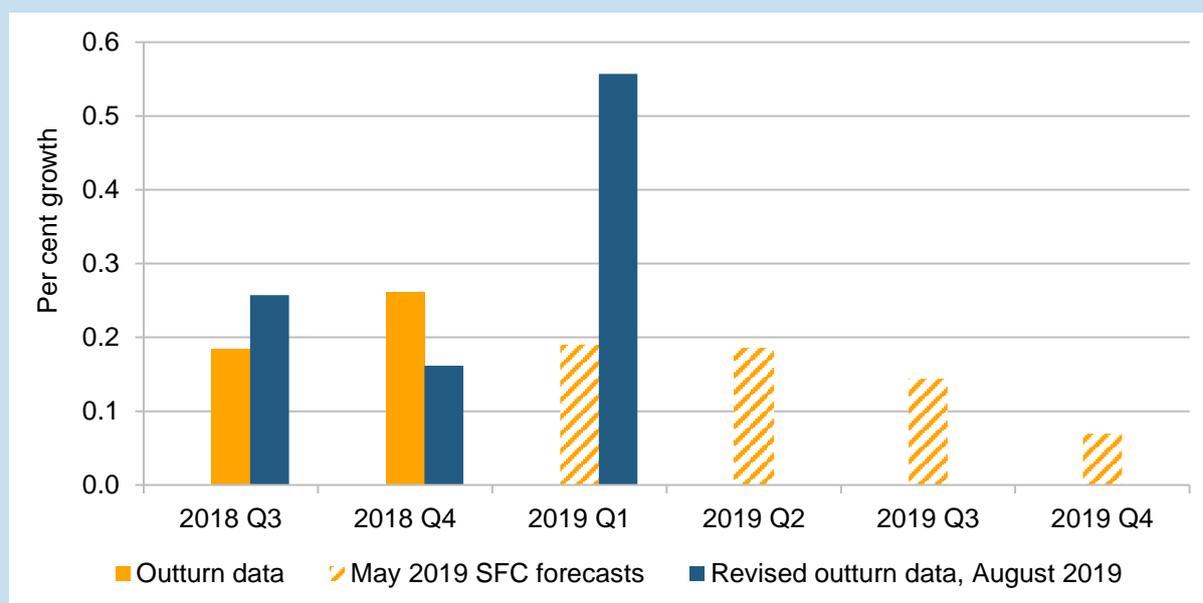
accurate. When looking at GDP from an expenditure perspective, there was a small error in our 2018 household consumption forecast, as shown in Table 3.4, but this was more than offset by larger errors in others of the underlying components of GDP such as net trade.

- 3.14 Our December 2017 forecast of total earnings growth in 2018-19 looks reasonable. In May 2018 we significantly revised down our outlook for earnings growth, particularly for 2019-20. Subdued earnings growth has been an important aspect of our recent forecasts and we feel it is important we evaluate this once data allow. Given that data on earnings and income tax in 2019-20 are still limited, we will provide a deeper evaluation of our earnings forecasts in our September 2020 Forecast Evaluation Report.
- 3.15 In this chapter, so far, we have focused on our economy forecasts for 2018 but, as we now have GDP outturn data up to 2019 Q1, we can also comment on how our latest GDP forecast for the first quarter of 2019 compares to the published estimate. We discuss GDP growth in 2019 Q1 in Box 3.1.

Box 3.1: GDP growth in 2019 Q1 and stockpiling

In our May 2019 report, we forecast growth in GDP in 2019 of 0.8 per cent. Outturn data published in August 2019 estimate growth in 2019 Q1 of 0.6 per cent, significantly above our forecast for the quarter of 0.2 per cent. Figure 3.1 shows our quarterly forecasts compared to the latest outturn.

Figure 3.1: Quarterly GDP growth, forecast and outturn



Source: Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Government (2019) Quarterly National Accounts Scotland 2019 Quarter 1 ([link](#)).

Quarterly GDP growth in Scotland tends to be highly volatile and is hard to predict. Generally, we focus on forecasting the annual growth figures rather than the

quarterly values. However, such strong growth in the first quarter of the year might suggest that our forecast for 2019 as a whole is looking like an underestimate.

Growth in 2019 Q1 appears to be driven in part by an expansion in inventories. Earlier in the year, firms were concerned about a 'hard Brexit' outcome in March, and so stockpiled goods to try to protect themselves from short-run difficulties. Higher growth from stock building is unlikely to be persistent. We expect the strength in 2019 Q1 to be offset in Q2 as firms run down their accumulated inventories. In the UK, where data are more timely, GDP grew by 0.5 per cent in Q1, similar to Scotland, and then fell by -0.2 per cent in Q2. This averages out to quarterly growth of around 0.2 per cent in the UK for 2019 so far.

Stockpiling could have a significant effect on the distribution of growth in 2019 between different quarters, but less of an effect on the annual growth figures. We will continue to monitor the economic data and update our forecasts in December 2019.

Conclusions

- 3.16 The revisions to economic data for 2017 remain the principal factor in our 2018 GDP forecast error. We expect the effect of our headline GDP forecast error on our income tax forecasts and other tax forecasts to be limited because of greater accuracy in our forecasts of total earnings.
- 3.17 The 2017 data revisions were exceptional and we discussed these at length in our September 2018 Forecast Evaluation Report. While we do not expect similar revisions to be common in the future, we will continue to engage with the Scottish Government to anticipate and communicate possible revisions effectively, and to consider the effect of these on our forecasts.



Chapter 4

Tax

- 4.1 This chapter provides an evaluation of our non-savings non-dividend income tax, NDR, LBTT and SLfT forecasts. Each of the Commission's tax forecasting responsibilities has developed in different ways over time. This means that the scope and depth of evaluation differs between each area. The evaluation depends on the length of time for which a tax has been forecast, and also the availability of outturn data.

Income Tax

4.2 Income tax is partially devolved. The responsibility for defining the income tax base, including setting or changing income tax reliefs and the personal allowance, continues to rest with the UK Government. HMRC remains responsible for the collection and management of Scottish income tax. HMRC is also responsible for deciding who is a Scottish taxpayer as defined in legislation. The Scotland Act 2012 defines a Scottish taxpayer as someone who is a UK taxpayer and has their main place of residence in Scotland.¹⁶

4.3 Table 4.1 shows the headline forecast error from the February 2017 forecast.

Table 4.1: Headline evaluation – income tax February 2017 forecast of 2017-18

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--|---------------------|-------------------|--------------------|
| 11,857 | 10,916 | 941 | 8.6 |
| Historic averages from OBR¹⁷ | | | |
| Average error ¹⁸ | | 633 | 5.8 |
| Average absolute error | | 633 | 5.8 |

Source: Scottish Fiscal Commission, HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)), OBR (2019) Historical official forecasts database ([link](#)), Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)).

Figures may not sum because of rounding.

4.4 The February 2017 Scottish income tax forecast for 2017-18 was published by the Scottish Government before the establishment of the SFC in its current role. The SFC was required to assess that forecast at the time and found it to be reasonable.¹⁹

4.5 Chapter 2 explains how the finalised 2017-18 NSND income tax outturn data has resulted in a £204 million reconciliation for the Scottish Budget for 2020-21.

4.6 The February 2017 forecast of 2017-18 has a forecast error of £941 million or around 8.6 per cent. The relative error of 8.6 per cent is around 2.8 percentage points higher than the average two-year ahead forecast error in the OBR's income tax forecast.

¹⁶ UK Government (2012) Scotland Act 2012 ([link](#))

¹⁷ As the Scottish Government's forecast used 2013-14 base survey data, but had access to more timely economic data, we have analysed the two-year ahead forecast error from OBR. The OBR's UK income tax forecasting performance is not a perfect proxy for income tax forecasting in Scotland as the availability and timing of information is quite different. UK income tax is historically more volatile as it includes dividends taxation, which is particularly sensitive to tax rate changes. The Scottish income tax forecast is only for non-savings, non-dividends income. For the absolute error in £ million, we scale to match Scotland.

¹⁸ The OBR's two year ahead income tax forecasts have consistently been on the optimistic side, resulting in the average error and average absolute error being the same.

¹⁹ Scottish Fiscal Commission (2017) Supplementary Note for Budget 2017-18 ([link](#))

- 4.7 When the February 2017 forecast was made, Scottish income tax outturn data was not available and the best available source of information on Scottish income tax was administrative survey data, known as the Survey of Personal Incomes (SPI). Since July 2018, HMRC has been publishing Scottish income tax outturn estimates. This new HMRC outturn release represents a fundamental data difference from previous survey based estimates.²⁰ On 18 July 2019 HMRC published its second full outturn estimate for Scottish income tax, covering the year 2017-18.²¹
- 4.8 We estimate that around £820 million of the February 2017 £941 million error was related to forecasts being based on an imperfect source of income tax revenue rather than full outturn data.
- 4.9 The February 2017 forecast was the last income tax forecast produced by the Scottish Government. The Commission has produced all subsequent official Scottish Government income tax forecasts.
- 4.10 Since the release of the July 2018 income tax outturn data, our forecast accuracy has improved significantly. Table 4.2 below shows a comparison between the previous five 2017-18 forecasts, and the latest outturn data.

Table 4.2: Summary of previous 2017-18 income tax forecasts

| Forecast | Forecast (£ million) | Error (£ million) | Error (Relative %) |
|------------------|----------------------|-------------------|--------------------|
| SG February 2017 | 11,857 | 941 | 8.6 |
| December 2017 | 11,584 | 668 | 6.1 |
| May 2018 | 11,467 | 551 | 5.0 |
| December 2018 | 11,008 | 92 | 0.8 |
| May 2019 | 11,005 | 89 | 0.8 |

Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)).

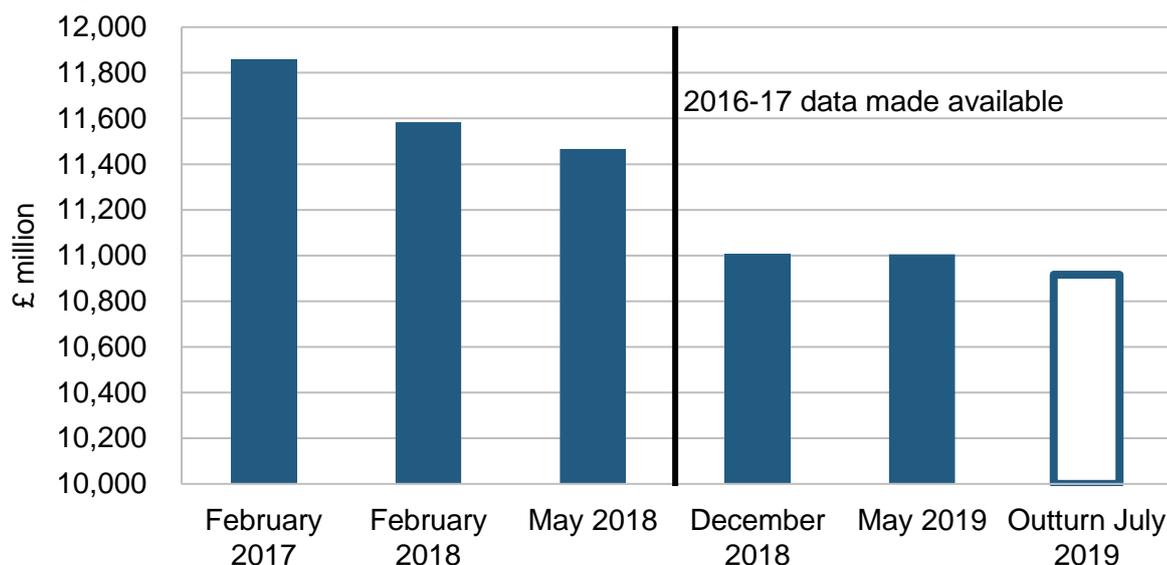
Figures may not sum because of rounding.

- 4.11 Over time our forecast error has decreased from 8.6 to 0.8 per cent. Figure 4.1 shows how the July 2018 release of the 2016-17 income tax outturn data played a key role in improving our December 2018 and May 2019 forecasts.

²⁰ HMRC (2018) Technical note: Scottish income tax HMRC annual report and accounts: 2017 to 2018 ([link](#))

²¹ HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#))

Figure 4.1: Income tax forecasts and outturn data for 2017-18



Source: HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)), Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), Scottish Fiscal Commission (2017) Scotland’s Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland’s Economic and Fiscal Forecasts – May 2019 ([link](#)).
 Figures may not sum because of rounding.

4.12 As well as evaluating forecasts of tax revenue, we can evaluate our latest forecast of the number of taxpayers. Table 4.3 below shows how the outturn number of taxpayers compares with our latest May 2019 forecast.

Table 4.3: Comparison of number of taxpayers by highest marginal NSND tax band

| Tax band | 2016-17 | | 2017-18 | | Relative Error (%) |
|-----------------|--------------|--------------|--------------|-------|--------------------|
| | HMRC Outturn | SFC May 2019 | HMRC Outturn | Error | |
| Basic rate | 2,221,100 | 2,200,400 | 2,191,300 | 9,100 | 0.4 |
| Higher rate | 294,000 | 307,400 | 308,000 | -600 | -0.2 |
| Additional rate | 13,300 | 13,800 | 13,800 | 0 | 0.0 |
| All | 2,528,400 | 2,521,600 | 2,513,100 | 8,500 | 0.3 |

Source: HMRC (2018) Technical note: Scottish income tax HMRC annual report and accounts: 2017 to 2018 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)), Scottish Fiscal Commission (2019) Scotland’s Economic and Fiscal Forecasts – May 2019 ([link](#)).

The HMRC outturn number of taxpayers rounded to the nearest 100 has been provided to us by HMRC. The existing publications round the number of taxpayers to the nearest 1,000.

Figures may not sum because of rounding.

4.13 As Table 4.3 shows, the relative forecast error for the total number of taxpayers is small at under 0.3 per cent. Our forecast was accurate in estimating the number of additional rate taxpayers. The largest error was for the number of basic rate taxpayers at 0.4 per cent.

Understanding our forecast error

4.14 We want to evaluate our one-year ahead forecast from our December Budget forecast. The latest outturn data are for 2017-18, and so in this section we evaluate the Scottish Government’s February 2017 forecast of 2017-18.

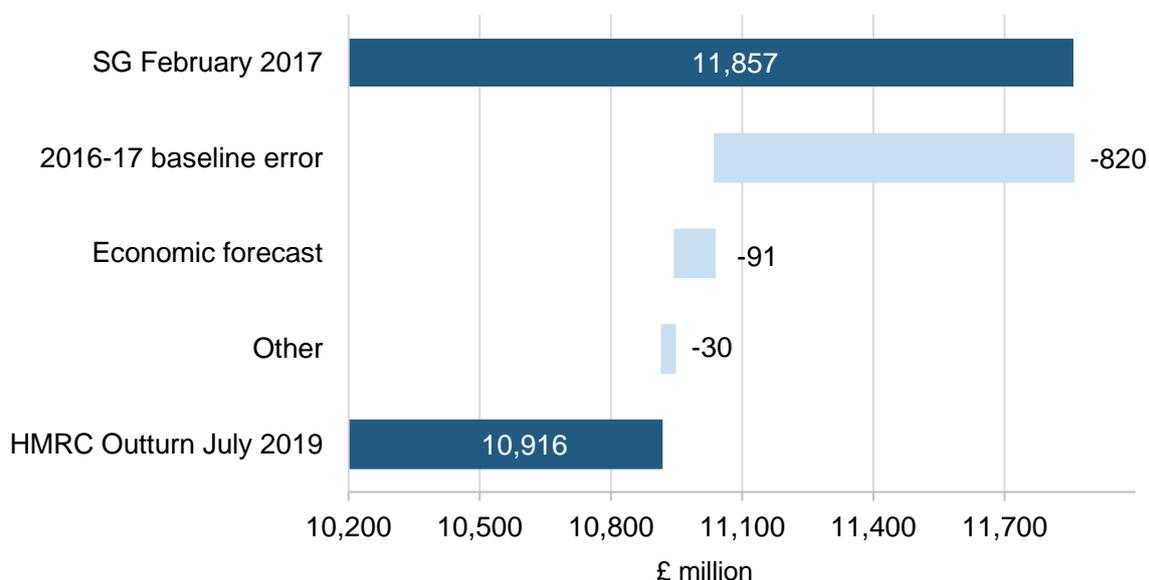
4.15 It is impossible to identify precisely what has contributed to the forecast error as data are provided at a highly aggregated level. We have provided an illustrative breakdown of the forecast error based on our own modelling work. Table 4.4 and Figure 4.2 provides an illustrative disaggregation of the 2017-18 forecast error from the Scottish Government’s February 2017 forecast.

Table 4.4: Table of illustrative Decomposition of February 2017 income tax forecast error for 2017-18

| | £ million |
|------------------------|-----------|
| SG February 2017 | 11,857 |
| 2016-17 baseline error | -820 |
| Economic forecast | -91 |
| Other | -30 |
| HMRC Outturn July 2019 | 10,916 |

Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)).
Figures may not sum because of rounding.

Figure 4.2: Figure of illustrative Decomposition of February 2017 income tax forecast error for 2017-18



Source: Scottish Fiscal Commission, Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)), HMRC (2019) Scottish Income Tax Outturn Statistics ([link](#)).
Figures may not sum because of rounding.

First Outturn data release

- 4.16 Before July 2018, estimates and forecasts of Scottish income tax were based on a publicly available version of HMRC's Survey of Personal Incomes, referred to as the Public Use Tape (PUT).
- 4.17 In July 2018, HMRC published Scottish outturn income tax data for the first time primarily based on administrative information.²²
- 4.18 The SPI survey and outturn estimate of Scottish income tax are significantly different. For example, now that we have both outturn data and SPI data for 2016-17, we can see that estimates of Scottish income tax based on the SPI are around £440 million greater than the outturn data.
- 4.19 When the February 2017 forecast was made, the latest available SPI and PUT data were for 2013-14. To forecast income tax in 2017-18, an estimate of income tax in 2016-17 first had to be made, and this was based on the 2013-14 SPI. Table 4.5 shows the February 2017 estimate of 2016-17 income tax based on the 2013-14 SPI, compared to the latest outturn data.

Table 4.5: Scottish income tax revenues in 2016-17, forecast and outturn

| £ million | 2016-17 |
|------------------|---------|
| SG February 2017 | 11,525 |
| Outturn | 10,719 |
| Error | 806 |

Source: Scottish Fiscal Commission, HMRC (2018) Technical note: Scottish income tax HMRC annual report and accounts: 2017 to 2018 ([link](#)), Scottish Government (2017) Updated Income Tax Policy Forecasts – February 2017 ([link](#)).

Figures may not sum because of rounding.

- 4.20 We estimate that using the 2013-14 SPI projected to 2016-17 led to an error of £806 million in the February 2017 estimate of income tax in 2016-17. We refer to this as the 2016-17 baseline error. We estimate that the 2016-17 baseline error of £806 million contributed around £820 million to the February 2017 Scottish income tax forecast error in 2017-18.

Box 4.1: HMRC Scottish residency experimental statistics

As income tax is a partially devolved tax, identifying Scottish taxpayers remains the responsibility of HMRC. The Scotland Act 2012 defines a Scottish taxpayer as someone who is a UK taxpayer and has their main place of residence in Scotland.²³

²² HMRC (2018) Technical note: Scottish income tax, HMRC annual report and accounts: 2017 to 2018 ([link](#))

²³ Scotland Act 2012 ([link](#))

There can be a difference between being a Scottish taxpayer as set out in the Scotland Act and having a Scottish residential postcode - for example if someone moves to Scotland towards the end of the year. Our September 2018 Forecast Evaluation Report highlighted this difference as a potential reason why the 2016-17 outturn data were £550 million lower than previous PUT based survey estimates.²⁴

In March 2019, HMRC published experimental statistics from the 2016-17 Survey of Personal Incomes (SPI) on the difference between Scottish taxpayer codes and residency based postcodes.²⁵ The statistics show that based on the survey, there is £100 million more in tax liabilities from taxpayers who have residential Scottish taxpayer postcodes, compared with Scottish taxpayer codes as defined in the Act.

This only represents around 0.9 per cent of total income tax liabilities, but we still want to understand more about why there is a consistent difference between the SPI and outturn. Our understanding will improve as we get more data in future years, and liaise closely with HMRC and OBR.

Economy forecast

4.21 Table 4.6 summarises the key economic determinants from the economy forecast used in the February 2017 forecast.

Table 4.6: Forecast and outturn growth in income tax economic determinants, 2017-18

| Per cent growth | Determinant | Forecast | Outturn | Error (percentage points) |
|-----------------|------------------|----------|---------|---------------------------|
| Scottish | Employment | 0.3 | 1.5 | -1.2 |
| Government | Average earnings | 2.3 | 1.0 | 1.3 |
| (November 2016) | Total earnings | 2.6 | 2.4 | 0.2 |

Source: Scottish Government (2016) Scotland's Budget: Draft Budget 2017-2018 ([link](#)), Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)).

Figures may not sum because of rounding.

4.22 The Scottish Government underestimated growth in employment but overestimated growth in average earnings. These two errors partially offset each other, and overall we find that there was only a slight overestimate of growth in total earnings of around 0.2 percentage points, resulting in the £91 million error attributed to the economic forecast.

²⁴ Scottish Fiscal Commission (2018) Forecast Evaluation Report September 2018 ([link](#))

²⁵ HMRC (2019) Personal Incomes: tables 3.1 to 3.11, and 3.16 and 3.17 for the tax year 2016 to 2017 ([link](#))

Other forecast factors

- 4.23 There are a number of other factors totalling £30 million that have contributed to the £941 million total forecast error. Since the SG February 2017 forecast, there have been refinements to the forecast such as modelling developments, inclusion of HMRC's incorporations modelling and analysis of UK policies.
- 4.24 Although it is difficult to quantify precisely these effects in the outturn data, there are good reasons to include these adjustments in the forecast. For example, we estimate the effect of historic UK policy measures such as the 2015 pensions flexibility policy. This policy increases the amount of taxable pension income that people aged 55 and above withdraw from their pension funds.

Conclusions

- 4.25 We estimate that around £820 million of the £941 million February 2017 forecast error of 2017-18 was as a result of the 2016-17 baseline error, predominantly driven by the lower than expected outturn data.
- 4.26 We have seen significant changes in estimates of Scottish income tax since our first forecast in December 2017. In December 2017, our estimates of Scottish income tax were based on a survey. In July 2018, outturn income tax data were published for Scotland for the first time. We now know that the difference between the survey based estimates and outturn data are around £560 million for 2016-17. Now that we can base our forecasts on outturn data, our forecast accuracy has improved significantly.
- 4.27 Our own income tax forecast error for 2017-18 has fallen from 6.1 per cent in December 2017 to 0.8 per cent forecasting in May 2019.

Non-Domestic Rates

4.28 Non-Domestic Rates (NDR) is a tax paid by the owner, tenant or occupier of non-domestic properties. The amount of paid is dependent on the rateable value of the property, the tax rate (also known as poundage) and any reliefs or exemptions for which the property is eligible.²⁶ While NDR is collected and ultimately spent by local authorities, the Scottish Government retains control over the policy framework of the tax. This includes control over decisions such as the poundage, the system of reliefs available to ratepayers, and the date at which a revaluation of properties will take effect.²⁷

4.29 Table 4.7 shows the overall forecast error from our December 2017 forecast of NDR income in 2018-19, as well as the average historical one-year-ahead error from the OBR's forecast of NDR income for the whole of the UK. It should be noted that our forecast error for 2018-19 has been assessed against provisional outturn data on NDR collected by local authorities. The scale of error may change once final audited figures are available.²⁸

Table 4.7: Headline evaluation – NDR December 2017 forecast of 2018-19

| Forecast (£ million) | Provisional Outturn (£ million) | Error (£ million) | Error (Relative %) |
|---|---------------------------------|-------------------|--------------------|
| 2,812 | 2,847 | -34 | -1.2 |
| Historic average from OBR²⁹ | | | |
| Average error | | | -1.4 |
| Average absolute error | | | 1.6 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government (2019) 2018-19 Notified NDRI returns ([link](#)), OBR (2019) Historical official forecasts database ([link](#)). Figures may not sum because of rounding.

4.30 Compared to some other taxes, we expect NDR income to be relatively stable. Income is collected from a large tax base – all eligible non-domestic property across Scotland – which doesn't grow or decline with the same volatility as with other taxes, such as Land & Buildings Transaction Tax. This is reflected in our relatively small forecast error of -1.2 per cent, or -£34 million, for 2018-19 which is slightly smaller than the average one year ahead error in the OBR's forecast of UK-wide NDR over the period 2010-11 to 2017-18.

²⁶ Rateable value is defined in the Valuation and Rating (Scotland) Act 1956 ([link](#)).

²⁷ Though local authorities do have the power to introduce their own locally funded reliefs under the Community Empowerment (Scotland) Act 2015 ([link](#)).

²⁸ The average annual difference between provisional outturn and final audited figures between 2010-11 and 2017-18 was £1.3 million.

²⁹ The OBR historical average is based on the average one-year ahead forecast error over the period 2010-11 to 2017-18.

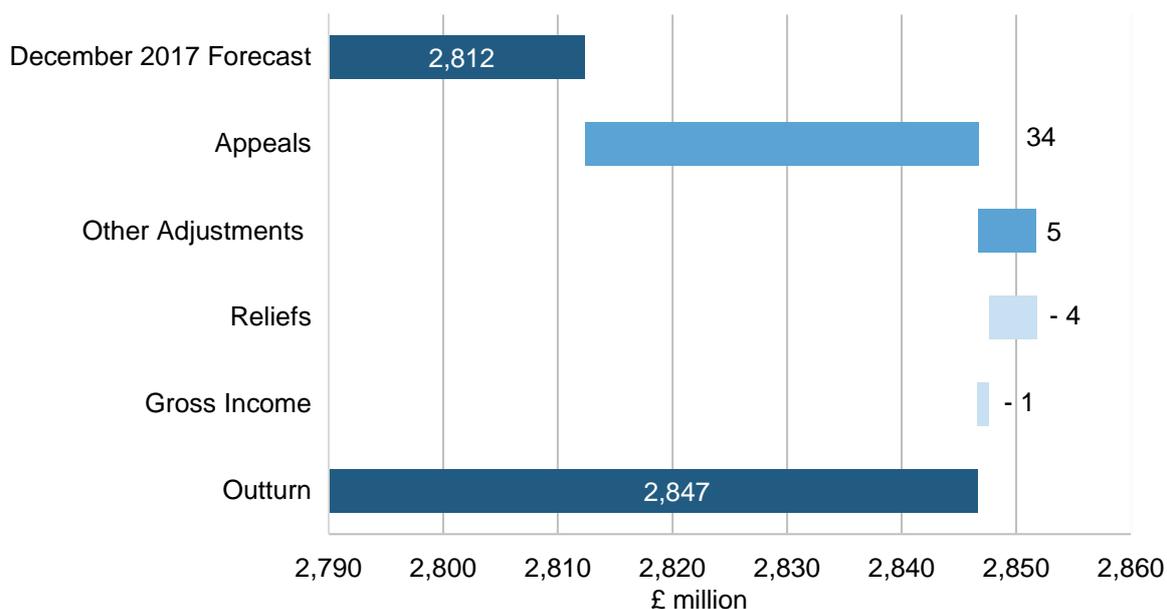
Understanding our forecast error

4.31 Despite the relatively small size of our overall NDR forecast error, individual components of the forecast may be subject to larger scale volatility and error. Several factors present challenges when forecasting the amount of revenue to be raised from NDR, such as:³⁰

- uncertainty about the tax base because of revaluation appeals
- policy changes relating to both the package of reliefs available and the administration of the tax
- outcomes of test cases heard in court which can affect large sections of the tax base
- behavioural changes with respect to factors such as take-up rates for relief schemes

4.32 Figure 4.3 shows the sources of our forecast error and the extent to which each contributed to the total error.

Figure 4.3: Decomposition of December 2017 NDR forecast error for 2018-19



Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government (2019) 2018-19 Notified NDRI returns ([link](#)).

Figures may not sum because of rounding.

4.33 The largest source of error in the forecast was backdated appeals. This is the income refunded to rate-payers in respect of overpayments of NDR following a successful revaluation appeal. In our 2018 Forecast Evaluation Report, we highlighted the need to be cautious when considering forecast errors at the start of a revaluation cycle when few appeals have been resolved, and our

³⁰ Further details can be found in Scottish Fiscal Commission (2018) Forecast Evaluation Report ([link](#)).

overestimate of the amount of income repaid as a result of appeals for 2018-19 highlights this issue.^{31, 32}

- 4.34 In December 2017, we estimated that £108 million of rateable value would be lost in 2018-19 as a result of appeals from the 2017 revaluation. The actual amount lost was £49 million. This difference of around £58 million in rateable value is equivalent to around £29 million of NDR income. This amount is reflected in the gross income error rather than appeals error, as the latter covers back-dated payments to ratepayers resulting from appeals, not the lower gross income as a result of the lower rateable value of the tax base. However, it is clear that if we overestimated the amount lost in-year to appeals, we will also have overestimated the back-dated losses.
- 4.35 Another likely source of error in the appeals is the amount of income lost to appeals on telecommunications entries on the roll, from the 2005 and 2010 revaluations, as a result of a 2014 judgment of the Court of Session. In December 2017 we estimated this to be £30 million but we do not yet have an outturn figure.
- 4.36 Given the uncertainties associated with forecasting the amount of rateable value lost to appeal, we will keep our approach to incorporating appeals losses under review as new data relating to the 2017 cycle become available.
- 4.37 Reliefs accounted for only a small proportion of the forecast error, with the combined error for mandatory, discretionary and back-dated reliefs contributing -£4 million to the overall forecast error. This hides larger discrepancies for individual reliefs, where positive and negative errors cancel each other out. Table 4.8 shows the three reliefs with the largest errors.

Table 4.8: December 2017 forecast errors for reliefs for 2018-19

| £ million | Forecast | Provisional Outturn | Error |
|-----------------------------|------------|---------------------|-----------|
| Business Growth Accelerator | 48 | 11 | 37 |
| Small Business Bonus Scheme | 245 | 262 | -16 |
| Empty property relief | 81 | 91 | -10 |
| Other mandatory reliefs | 320 | 331 | -11 |
| Discretionary reliefs | 36 | 37 | -1 |
| Backdated reliefs | 5 | 8 | -3 |
| Total | 735 | 739 | -4 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government (2019) 2018-19 Notified NDRI returns ([link](#)).

Figures may not sum because of rounding.

³¹ We have changed our methodology for decomposing the NDR forecast error since the 2018 Forecast Evaluation Report. The overall error remains comparable but the split of the error between gross income and appeals means that these components of the error cannot be directly compared. Nevertheless, the discussion of these errors remains relevant.

³² See Scottish Fiscal Commission (2018) Forecast Evaluation Report ([link](#))

- 4.38 The largest error is for the Business Growth Accelerator. This was one of a number of new or changed reliefs introduced in the 2018-19 Budget. These are discussed in more detail in the policy costings section below.
- 4.39 We noted in our 2018 Forecast Evaluation Report that empty property relief was likely to be a persistent source of error in our forecast. The one year ahead error of £10 million for 2018-19 is slightly lower than the in-year error of £15 million for 2017-18. The difficulty in forecasting this relief can be partly attributed to recent policy changes relating to the criteria for and the administration of the relief.³³ These, combined with the effect of the 2017 revaluation, have made it difficult to determine the likely trend in the amount of relief claimed.
- 4.40 In our December 2018 forecast we revisited our methodology for this relief and determined that the mid-year estimates provided by local authorities were systematically underestimating the final audited amount. We changed the basis for estimating this to the audited figure from the previous year, rather than the mid-year estimate for the current year.
- 4.41 Other adjustments contribute £5 million of the forecast error. These adjustments include various incoming and outgoing payments, such as write-offs, bad debts and refunds. Many of these payments are by their nature difficult to forecast as they relate to prior years and to payments that were not expected, such as payments of debt that had been written-off.
- 4.42 The largest forecasting errors were for bad debts collected, late additions to the roll and income from the Business Rates Incentivisation Scheme (BRIS). Our December 2017 forecast underestimated the 2018-19 income from bad debts collected and late additions to the roll by around £10 million, while the income from BRIS was underestimated by around £4 million. BRIS allows Local Authorities to retain some of their NDR income if they exceed their targets for buoyancy (growth in the tax base). Since BRIS is retained by Local Authorities it is not pooled with the rest of the NDR income and so is deducted from overall NDR income. Hence, this forecast error works in the opposite direction to those for bad debts collected and late additions to the role, despite all three being underestimates.
- 4.43 Due to the nature of these adjustments and the absence of clear trends in the outturn data, it will always be challenging to forecast these amounts

³³ In 2013-14, policy was changed so that empty commercial property could claim 100 per cent relief for the first three months and 10 per cent thereafter rather than 100 per cent for the first three months and 50 per cent thereafter ([link](#)). As of 2016-17, unoccupied industrial property is eligible for 100 per cent relief for the first six months since becoming unoccupied and thereafter 10 per cent indefinitely. Other (non-industrial) unoccupied property is eligible for 50 per cent relief for the first three months since becoming unoccupied and thereafter 10 per cent indefinitely ([link](#)).

accurately. However, we will continue to monitor our approach and consider any improvements that could be made.

- 4.44 Gross income accounted for only £1 million of our forecast error. However, this masks larger errors within the category. Gross income is the total estimated tax liable, before accounting for any reliefs, or other factors that reduce NDR income such as debt write-offs. It also includes the 2018-19 gross income lost as a result of appeals (but not any back-dated payments related to appeals). Given the data that are available to us, we are only able to assess two aspects of the gross income error: growth in the tax base (also known as buoyancy) and the amount of income lost to revaluation appeals.
- 4.45 Buoyancy in 2018-19 was 1.3 per cent, compared to 1.8 per cent forecast in December 2017. In terms of rateable value, this equates to an error of £37 million, which in turn lowered the NDR gross income by roughly £18 million in 2018-19. The reasons for this overestimate and the subsequent changes made to our methodology for forecasting buoyancy were discussed in our 2018 Forecast Evaluation Report.³⁴ Had we used the revised methodology in December 2017, our forecast error for gross income in 2018-19 would have been roughly £8 million lower.
- 4.46 The contribution of appeals loss to the gross income error is around £29 million. This is discussed in paragraph 4.34. Had we accurately forecast the appeals loss and buoyancy, these factors combined would have increased our gross income forecast by £11 million. As the total error for gross income is -£1 million, there is an additional £12 million of error that we are unable to account for with the available data.

Policy costings

- 4.47 There were seven policy changes made as part of the 2018-19 Budget for which we produced costings. These were:
- Uprating the poundage in 2018-19 using CPI instead of RPI.
 - Introduction of a new relief, named 'Business Growth Accelerator', whereby a twelve month delay is introduced before rates are increased when an existing property is expanded or improved, and also before rates apply to a new build property once occupied for the first time.
 - Expansion of 'Fresh Start' relief from 50 per cent to 100 per cent for the first year of new occupation and widening availability to properties that have been empty for six months instead of the previous twelve months.

³⁴ Scottish Fiscal Commission (2018) Forecast Evaluation Report 2018 ([link](#))

- Introduction of a 100 per cent relief for day nurseries.
- Continuation (from 2017-18) of transitional relief, for offices in Aberdeen/Aberdeenshire and for properties in the hospitality industry with a rateable value of less than £1.5 million.
- 60 per cent relief for hydro schemes with a rateable value of no more than £5 million.
- A measure to encourage speculative build, whereby new build properties will not be entered onto the valuation roll until occupied.³⁵

4.48 Of these seven costings, we are able to assess the accuracy of four. For the others we are not able to evaluate the costing. In the case of hydro relief and the expansion of Fresh Start this is because of lack of available data. The outturn data from the notified returns includes hydro relief with renewable relief and we are not able to separately identify each relief. Similarly, we cannot separate the Fresh Start outturn figure into the amounts that relate to only to properties eligible under the expanded rules. Evaluation of these two costings may be possible once new billing system data become available in November 2018. The costing of uprating the poundage using CPI rather than RPI was based on known rates of CPI and RPI, so any error is simply a function of the overall forecast error.

4.49 Table 4.9 shows the errors for the four costings where evaluation is possible.

Table 4.9: December 2017 forecast errors for policy costings for 2018-19

| £ million | Forecast | Provisional Outturn | Error |
|-------------------------------------|----------|---------------------|-------|
| Continuation of transitional relief | 15 | 12 | 3 |
| Day nursery relief | 6 | 10 | -4 |
| Business Growth Accelerator | 48 | 11 | 37 |
| Delaying entry on the roll | 1 | 6 | -4 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government (2019) 2018-19 Notified NDRI returns ([link](#)).

Figures may not sum because of rounding.

4.50 The largest difference is for the Business Growth Accelerator (for improved and occupied new build property), where the size of the error is £37 million. At the time of producing our costing, we had assumed that the take-up rate for this relief would be 100 per cent. However, once we received the mid-year estimates reported by local authorities in October 2018, it was apparent that the take-up rate, in 2018-19 at least, would be much lower. This appears to be in part because of a combination of lower than expected ratepayer awareness

³⁵ This measure has since been replaced by the unoccupied new builds relief ([link](#)).

of the relief along with IT infrastructure challenges in certain local authorities.³⁶

- 4.51 The size of the error for the Business Growth Accelerator and, to a lesser extent, for the other policy costings, highlights the difficulties where there are no prior data on which to base our forecasts. Even where we are able to identify on the valuation roll which properties would be affected by a new policy, estimating factors such as take-up rates and behavioural effects remains difficult. We expect that estimating the effect of changes to Government policy will continue to be a source of error in our forecasts.
- 4.52 In our December 2018 forecast we revised our costing of Business Growth Accelerator and delaying entry onto the roll, based on the preliminary data received.³⁷ We will continue to monitor our costings of these reliefs as more data becomes available.

Conclusions

- 4.53 We can expect that on average, the NDR forecast error, expressed as a percentage, will be smaller than for other taxes, because of the larger and relatively more stable tax base. While our proportional errors may be relatively small, our errors expressed in monetary amounts may be larger compared to the other fully devolved taxes.
- 4.54 In our 2018 Forecast Evaluation Report we noted that future sources of forecast error will most often come from changes in Government policy and losses because of appeals. Our analysis of the 2018-19 forecast error confirms this view, with our forecast for appeals and Business Growth Accelerator both being a significant source of error. We will continue to review our methodology and assumptions in these areas as more data become available.
- 4.55 We expect that appeals and policy changes will continue to be a significant source of error in future forecasts. The NDR (Scotland) bill introduced in Parliament on 25 March 2019 provides the legislation required for a number of significant changes to the NDR system, including moving to a three-yearly revaluation cycle.³⁸ Based on our experience of forecasting appeals and policy changes to date, we anticipate that these changes will be hard to forecast.

³⁶As a result of the issues we have discussed, not all local authorities have reported figures for Business Growth Accelerator granted in the provisional outturn figures. See Scottish Fiscal Commission (2018) – Scotland's Economic and Fiscal Forecasts December 2018 ([link](#)).

³⁷ Our recosting estimated the cost of these together because in many cases the award of one will be linked to the other. Some properties will start claiming Unoccupied New Build relief before transitioning to Business Growth Accelerator as they become occupied.

³⁸ Non-Domestic Rates (Scotland) Bill ([link](#))

Land and Buildings Transaction Tax

- 4.56 Land and Buildings Transaction Tax (LBTT) is payable upon the purchase of residential land or property, the purchase or lease of non-residential land or property, and upon the purchase of an additional residential property.
- 4.57 Table 4.10 shows our headline forecast error in our December 2017 forecasts for the components of LBTT.

Table 4.10: Headline evaluation – LBTT December 2017 forecast of 2018-19

| LBTT component | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|---|----------------------|---------------------|-------------------|--------------------|
| Residential LBTT | 305 | 262 | 42 | 16 |
| Additional Dwelling Supplement | 93 | 100 | -6 | -6 |
| Non-Residential LBTT | 190 | 193 | -3 | -2 |
| Total LBTT | 588 | 555 | 33 | 6 |
| Historic average from OBR³⁹ | | | | |
| Average error | | | | 1 |
| Average absolute error | | | | 13 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Revenue Scotland (2019) Provisional Outturn Data 2018/19 ([link](#)), OBR (2019) Historic official forecasts database ([link](#)).

Figures may not sum because of rounding.

- 4.58 For overall LBTT, our December 2017 forecast of 2018-19 revenue was £588 million, and the outturn figure was £555 million. This means a forecast error of £33 million, or around 6 per cent of outturn. This is lower than the average one year ahead absolute error in the OBR's forecast of UK-wide property transaction taxes. The component errors are more varied both in scale and in direction. The relative error on the residential component was larger than on the non-residential or Additional Dwelling Supplement components.

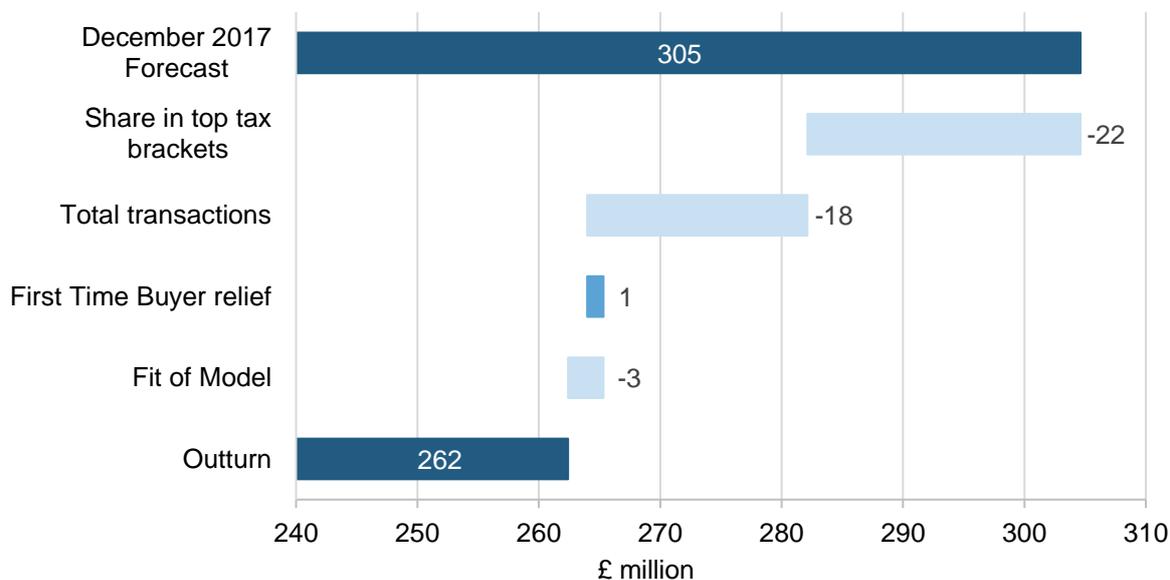
Residential LBTT

- 4.59 Our residential LBTT forecast is determined by the number of transactions in a given year and what share of those transactions will fall into each tax bracket. In December 2017 we expected transactions growth to increase, reaching a high of 11 per cent year-on-year in the final quarter of 2017-18, before slowing to 2 per cent in late 2018-19. We also expected that 10.5 per cent of transactions in 2018-19 would fall into the top two tax brackets.⁴⁰
- 4.60 In Figure 4.4, we show the sources of forecast error for our residential LBTT forecast for 2018-19.

³⁹ OBR SDLT historic averages of one-year ahead forecast error from June 2010 to March 2017.

⁴⁰ Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#))

Figure 4.4: Decomposition of December 2017 Residential LBTT forecast error for 2018-19



Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Revenue Scotland (2019) provisional outturn data 2018/19 ([link](#)).
 Figures may not sum because of rounding.

4.61 The main source of forecast error came from our estimate of the share of transactions falling into the top two tax brackets (for properties bought for between £325,000 and £750,00 and those bought for over £750,000). This is to be expected given that these accounted for 74 per cent of residential LBTT in 2018-19. In our December 2017 forecast, we expected 10.5 per cent of transactions to fall into the top two tax brackets in 2018-19, up from 9.2 per cent in 2017-18. This was a continuation of the trend we had observed in the most recent data available at the time. Instead the share of transactions in the top two brackets grew to 9.6 per cent in 2018-19, less than we had anticipated. As a result, our revenue forecast was £22 million higher than it would have been had our forecast of the share of transactions in the top two tax brackets matched the outturn data.⁴¹

4.62 Total transactions volumes were the other main source of our forecast error for 2018-19. Our forecast for the total number of transactions was too high, at around 110,000 transactions as opposed to an outturn figure of 103,000 in 2018-19. Had our overall transaction forecast matched the outturn data, our revenue forecast would have been around £18 million lower.

4.63 A smaller source of error in our forecast is the adjustment we apply to our revenue forecast, to align our forecast model with historic data. This captures

⁴¹ In technical terms, the shape of the lognormal distribution we use to forecast residential LBTT depends on how close the median price is to the mean price. Our forecast for the ratio of the median to the mean price was too low, meaning that we forecast that the mean price was much higher than the median price than turned out to be the case. Hence, we forecast too large a share of transactions falling into the higher price brackets.

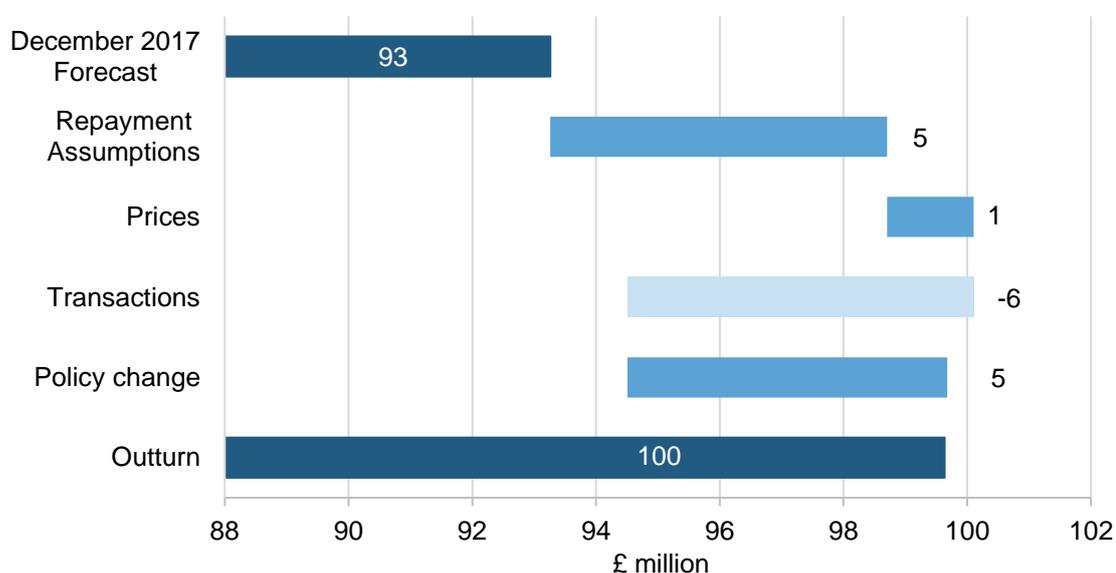
both how well our model of the distribution of transactions fits past data and also the value of reliefs (other than First Time Buyer relief). The adjustment factor we used in December 2017 increased our revenue forecast by around £3 million compared to the outturn.

4.64 When we produced our forecast in December 2017, the Scottish Government had set out plans to provide some relief from LBTT to those buying their first residential property, First Time Buyer (FTB) relief.⁴² We estimated the effect of this policy on residential LBTT revenue, and lowered our forecast accordingly. At the time, we estimated the effect to be a revenue decrease of around £5 million. Based on provisional outturn data from Revenue Scotland, we know that the total amount of relief claimed (equivalent to the revenue foregone) was £4 million. We reduced our forecast by more than we should have to account for the policy, which is unsurprising given we made forecast errors for prices and transactions. Had we correctly forecast the amount of FTB relief claimed, our forecast would have been around £1 million higher.

Additional Dwelling Supplement (ADS)

4.65 In Figure 4.5, we show the sources of forecast error for our ADS forecast.

Figure 4.5: Decomposition of December 2017 ADS forecast error for 2018-19



Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Revenue Scotland (2019) Provisional Outturn Data 2018/19 ([link](#)).
 Figures may not sum because of rounding.

4.66 Our forecast for 2018-19 ADS revenue was approximately £6 million lower than the outturn figure of £100 million. Much of the difference between the forecast and outturn can be explained by a policy change in December 2018,

⁴² The Land and Buildings Transaction Tax (First-Time Buyer Relief) (Scotland) Order 2018 ([link](#))

after we had produced our forecast. This change led to an increase in the rate applied to additional dwellings. The higher tax rate led to an increase in revenue from transactions falling after 25 January 2019. We discuss this further in Box 4.2.

- 4.67 The rest of the error is the result of price and transaction forecasts that did not match the outturn figures, and modelling assumptions made at the time of the forecast. The effect of outturn prices would have been to increase the ADS forecast by around £1 million, and the effect of outturn transaction data would have been to decrease the forecast by around £6 million. Overall, prices and transactions would have decreased the forecast by around £4 million. This leaves us with an error (after the policy change) of around £5 million. This is mainly the result of the repayment assumptions we used in December 2017, when we had less data on the proportion of ADS revenue ultimately reclaimed.

Box 4.2: ADS Forestalling

Two LBTT policy changes were introduced by the Scottish Government in the 2019-20 Budget, both of which were implemented in the 2018-19 financial year. One of these was an increase in the rate of ADS from 3 per cent to 4 per cent, with effect from 25 January 2019. These policies were only announced in December 2018 so were not known when we produced the 2018-19 forecast in December 2017.

The announcement was made on 12 December 2018, and there were around 27 working days between the announcement and the policy change. We do not think this offered much time for buyers to bring forward their purchases – the most likely people to do so would be buyers who were already planning to complete purchases shortly after 25 January 2019.

We looked at data on transactions during the period of December 2018 to April 2019. We do not think that any transactions were brought forward from 2019-20, as the April 2019 transactions were in line with what we'd expect based on April 2018 transactions. We then estimate what would have happened, had the transactions in late January, February, and March been taxed at 3 per cent. This tells us how much revenue was gained by the policy change and how much revenue we could not have foreseen when we produced our forecast.

We estimate that the rate change increased net ADS revenue by £5 million. The gross increase in ADS revenue was a little higher, but slightly higher repayments reduced the net effect. This increase explains a large part of the error in the ADS forecast.

4.68 We assumed the repayment of revenue would follow a pattern similar to what we observed between April 2016 and October 2017. We had one data point to estimate the amount of revenue reclaimed within 18 months, and this suggested a repayment rate of around 29 per cent. We now know, with several more data points, that the proportion of revenue repaid is less than we had assumed. When less revenue is repaid, the net ADS revenue is higher. Using the actual repayments of revenue during the forecast period suggests an increase in our forecast of around £5 million, and explains most of the remaining error.

Non-Residential LBTT

- 4.69 In December 2017, our approach to forecasting non-residential LBTT was to estimate revenue in a base year – composed of the average of the most recent three years – and grow this revenue estimate using price and transaction forecasts. At that time, we estimated that the revenue in a base year would be £189 million. Our forecast growth for prices was -0.7 per cent in 2018-19, and our forecast for transaction growth was 1.5 per cent.
- 4.70 Our forecasting approach at that time limits what we can say about the forecast error. The use of overall revenue meant that we did not break down the revenue into purchases, leases, or reliefs. This limits the extent of the evaluation we can undertake – but we do note some features of 2018-19 that might explain some of the -£3 million total error reported in Table 4.10.
- 4.71 The outturn figure for 2017-18 was £204 million, while both price growth and transaction growth were also above our forecasts. Had our forecast determinants matched these data, our forecast would have increased by around £18 million.
- 4.72 The rest of the error is difficult to assess, but we think there are two main reasons. First, we know that the proportion of revenue foregone to reliefs in 2018-19 was higher than in 2017-18. We estimate that much of the £18 million error could be accounted for by the higher proportion of reliefs – though we cannot provide a specific number for what our forecast would have been.
- 4.73 Second, we note that there was a policy change toward the end of 2018-19, which changed non-residential tax rates and bands from 25 January 2019 onward. We think our policy costing in December 2018 was broadly correct.⁴³ There was a small amount of forestalling, and some gain in revenue. Evaluating the precise impact of the policy change on revenue is not possible, given the data available.

⁴³ Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Outlook – December 2018 ([link](#))

Conclusions

- 4.74 Compared to taxes like income tax or NDR, LBTT is relatively , with narrow sections of the tax base accounting for most of the revenue raised. Less than 4 per cent of residential transactions accounted for half of all residential LBTT revenue raised in 2018-19. This is also the first year for which we have carried out an evaluation of our own one-year ahead forecasts. This volatility and limited forecast history means that we must be cautious in our conclusions. Nevertheless, we feel there are some lessons we can draw.
- 4.75 The residential component of LBTT was the source of most of the error in our forecast. This was mainly because we forecast too many transactions falling into the top two tax brackets. We reviewed and altered our model for forecasting total transactions volumes in December 2018, resulting in a lower forecast. We are currently reviewing our model for forecasting the distribution of those property transactions with a view to updating it for our upcoming forecast for the Scottish Budget.
- 4.76 The non-residential forecast was close to the outturn figure, although we think this was the result of a cancelling out between more reliefs and higher price and transaction growth. We did not explicitly account for these in our previous models, but our current approach to forecasting non-residential LBTT does include a forecast for reliefs. By taking these into account, and the price at which we expect transactions to take place, we should be able to provide more comprehensive evaluation of our future forecasts. We continue to note that non-residential LBTT is a very volatile tax, with large unanticipated swings to be expected from year to year.
- 4.77 Our ADS forecast error was, in part, the result of a policy change announced during the 2018-19 financial year. We think this policy change explains around £5 million of the £6 million error. The rest of the error is a combination of lower transaction volumes than we expected – which reduced revenue – and lower repayment rates, which increased net ADS revenue.

Scottish Landfill Tax

4.78 Scottish Landfill Tax (SLfT) was devolved as part of the Scotland Act 2012 and replaced UK Landfill Tax in April 2015. It taxes the disposal of waste to a landfill in Scotland, whether or not this waste is being disposed to an authorised landfill site. This is an environmental tax, and among other things is designed to support Scottish Government efforts to “find economical alternatives to landfill that will minimise waste and help to create a more circular economy”.⁴⁴

4.79 Table 4.11 shows our headline forecast error in our December 2017 forecast of 2018-19.

Table 4.11: Headline evaluation – SLfT December 2017 forecast of 2018-19

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--|---------------------|-------------------|--------------------|
| 106 | 141 | -35 | -25 |
| Historic averages from OBR⁴⁵ | | | |
| Average error | | | 6 |
| Average absolute error | | | 9 |

Source: Scottish Fiscal Commission, Revenue Scotland (2019) Provisional Outturn Data 2018/19 ([link](#)), OBR

Forecasts in depth: Landfill Tax – previous forecasts data download ([link](#))

Figures may not sum because of rounding.

4.80 Provisional figures from Revenue Scotland show £141 million was raised in 2018-19. This compares to forecasts of £106 million and £136 million made by the Commission in December 2017 and December 2018 respectively.

4.81 The amount of waste landfilled and revenue raised has been relatively stable historically. Recent legislative change and an increasing range of waste management options has led to greater uncertainty about the future volume of waste landfilled in Scotland. The volume of waste diverted to landfill is increasingly dependent on changes in incineration capacity, recycling rates and international energy from waste markets. Because of these, our December 2017 one-year ahead forecast error for 2018-19 is larger than the historic average OBR one-year ahead forecast error.

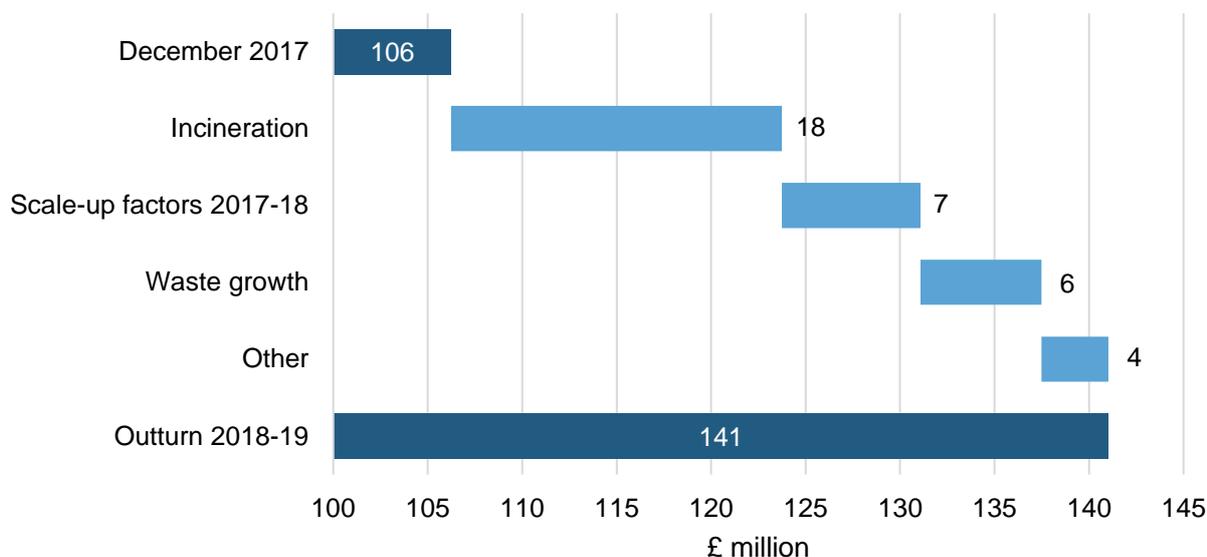
Understanding our forecast error

4.82 Figure 4.6 presents the different factors that contribute to the 2018-19 forecast error from our December 2017 forecast.

⁴⁴ Scottish Government. Scottish Landfill Tax ([link](#))

⁴⁵ OBR UK landfill tax historic averages of one-year ahead forecast error from 2010-11 to 2017-18.

Figure 4.6: Decomposition of December 2017 SLfT forecast error for 2018-19



Source: Scottish Fiscal Commission, Revenue Scotland (2019) Provisional Outturn Data 2018/19 ([link](#)). Figures may not sum because of rounding.

- 4.83** The largest source of error was our forecast for additional incineration capacity coming online. Incineration capacity is one of the main factors affecting our forecast and the volume of wasted landfilled. Incineration transforms waste that cannot be reused, recycled or recovered into electricity and heat. As incineration capacity in Scotland increases less waste is diverted to landfill.
- 4.84** Our forecast contained assumptions about the operational and construction status of the incineration sites based on updates provided by Scottish Environmental Protection Agency (SEPA). Delays in the timing of these facilities coming on-line affected our forecasts of waste landfilled and SLfT revenue. In December 2017, we expected an additional 489,708 tonnes to be incinerated in 2018-19. As a result of delays in the construction of incinerations sites an additional 247,126 tonnes were actually incinerated. The lower than expected incineration capacity accounts for £18 million of the forecast error in 2018-19.
- 4.85** In December 2017, we had one quarter of data for 2017-18 from Revenue Scotland on landfill **tonnages**. We produced our in-year forecast by scaling up this up using historic patterns from HMRC’s landfill tax statistics for the UK as a whole prior to devolution.⁴⁶ To create our 2018-19 forecasts, we grew the in-year estimate in line with our incineration, recycling and waste generation assumptions. This accounted for £7 million of our overall forecast error in

⁴⁶ Scottish Fiscal Commission (2018) Forecast Evaluation Report ([link](#)) contains further detail on the approach we followed.

2018-19, as the share of the annual tonnage of standard rate waste generated in the first quarter of 2017-18 was lower than expected.

- 4.86 We used waste projections net of recycling as a proxy to grow our in-year forecast, before accounting for incineration capacity. We expected a decrease in the volume of non-recycled waste of 0.7 per cent in 2018-19. Our latest estimate shows that there was an increase of 3.8 per cent in the volume of non-recycled waste generated. This accounts for £6 million of our overall forecast error.

Conclusions

- 4.87 Changes in landfilled rates and a wider range of waste management options available may potentially increase the volatility of the tax base and led to larger forecast errors in the future.
- 4.88 The timings of future incineration capacity is a key risk in our forecast and we will assess the suitability of our assumptions in future forecasts. The Commission intends to continue monitoring the progress of incineration sites with SEPA's support. The introduction of a ban on biodegradable municipal waste also present a risk to our forecast. We will continue working with the Scottish Government to better understand the implementation of the ban.



Chapter 5

Social Security

Introduction

5.1 This is the first time we have evaluated our social security forecasts. The primary comparison is 2018-19 outturn against our December 2017 forecast, but we also show how the forecast has developed over 2018 and 2019. For Best Start Grant we compare against the costing we produced in September 2018. We are not evaluating the December 2017 forecast of Funeral Payments as they were not yet devolved in 2018-19.

Summary of social security forecast error

5.2 Table 5.1 summarises the forecast errors across all the relevant benefits.

Table 5.1: Summary of December 2017 social security forecast error

| | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--|-------------------------|------------------------|----------------------|-----------------------|
| Carer's Allowance | 265 | 152 | 113 | 74 |
| Carer's Allowance Supplement | 35 | 35 | 0 | 0 |
| Discretionary Housing Payments | 61 | 62 | -1 | -1 |
| Best Start Grant | 2 | 4 | -3 | -59 |
| Scottish Welfare Fund [1] | 34 | 33 | 1 | 4 |
| Scottish Government social security portfolio | 396 | 286 | 111 | 39 |
| Employability Services | 24 | 19 | 5 | 26 |
| Healthy Start Vouchers | 4 | 4 | 0 | 7 |
| Total benefit expenditure | 424 | 308 | 116 | 38 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Fiscal Commission (2018) Supplementary Costing – Social Security – Best Start Grant (Pregnancy and Baby Payment) – September 2018 ([link](#)), Scottish Government (2019) Scottish Welfare Fund Statistics ([link](#)), Scottish Government unpublished expenditure data.

Figures may not sum because of rounding.

[1] Our forecast for Scottish Welfare Fund included the costs to mitigate UK Government changes to the housing component of Universal Credit for some 18-21 year olds. The actual mitigation costs turned out to be immaterial. See Scottish Government (2019) Scottish Welfare Fund statistics: Annual Update 2018-19 ([link](#))

- 5.3 Our total error was 38 per cent with the forecast exceeding outturn by £116 million. This was almost entirely because of a £113 million error for Carer's Allowance, the largest of the benefits to have been devolved so far. This error was caused by devolution not taking place until nearly half way through the financial year, while our forecast was for a full year of expenditure.

Contextual factors

- 5.4 The outturn figures quoted throughout this chapter are the latest available, but are provisional and may be superseded by the final audited accounts for Social Security Scotland.
- 5.5 The estimated population in 2018 was slightly lower than ONS had projected in the 2016-based projections which informed our December 2017 forecast. We have not quantified this effect in our decompositions of forecast error other than where the number of births or young children are an important part of our model. It is a small effect relative to other factors, and some of the difference would already have been implicitly captured in other statistical and financial information that was included in our forecasts.
- 5.6 The inflation rates used to inform benefit uprating for 2018-19 were already known when we published our December 2017 forecast, so inflation forecasts are not a factor in this assessment, but continue to represent a risk to our social security forecasts over longer time horizons.

Comparison to OBR forecast performance

- 5.7 Carer's Allowance and the Carer's Allowance Supplement are the only benefits where we can meaningfully compare performance, as the OBR does not produce forecasts for the other benefits in our scope for 2018-19.⁴⁷
- 5.8 The mean absolute error in the OBR's one-year ahead forecast of Carer's Allowance expenditure in Great Britain is 3.0 per cent.⁴⁸ Our forecast was 74 per cent higher than outturn, mainly because the benefit was not devolved until nearly half way through the financial year. If we compare on a part-year basis then the error is 2.6 per cent, broadly in line with the average OBR error.

⁴⁷ Benefits such as Sure Start Maternity Grant and Discretionary Housing Payments are funded through the Departmental Expenditure Limit (DEL) for the Department for Work and Pensions, which is a budget set by HM Treasury.

⁴⁸ Source: Scottish Fiscal Commission calculations from Department for Work and Pensions (2010-2019) Benefit Expenditure and Caseload Tables ([link](#))

Carer's Allowance

Table 5.2: Headline evaluation – Carer's Allowance December 2017 forecast of 2018-19

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--|---------------------|-------------------|--------------------|
| 265 | 152 | 113 | 74 |
| Historic averages from OBR⁴⁹ | | | |
| Average error | | | -0.4 |
| Average absolute error | | | 3.0 |

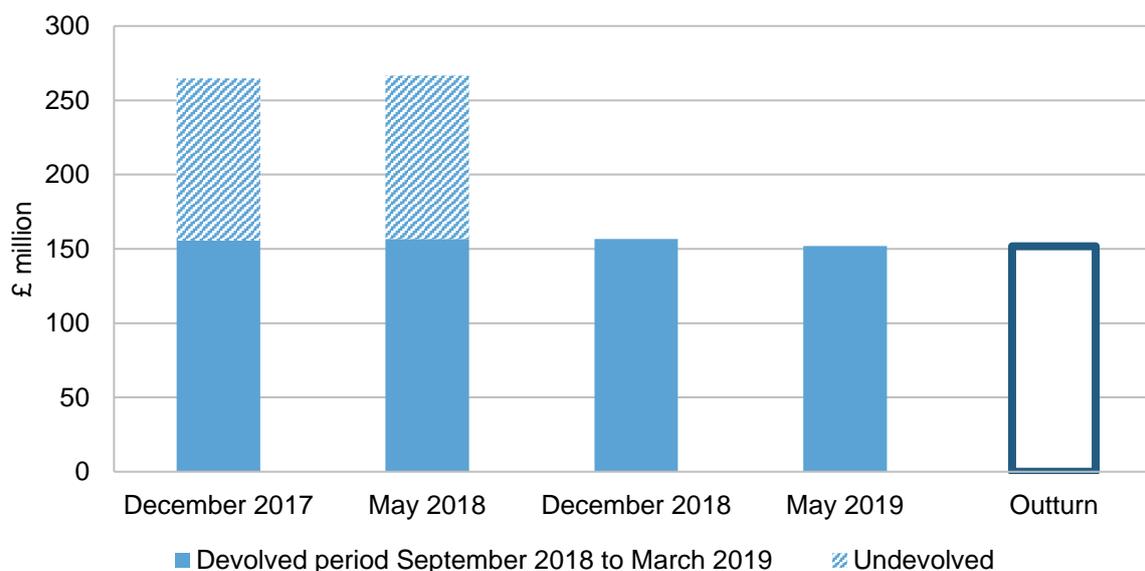
Source: Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Government unpublished expenditure data, Department for Work and Pensions (2010-2019) Benefit Expenditure and Caseload Tables ([link](#)).

Figures may not sum because of rounding.

- 5.9** A direct comparison against our original December 2017 forecast shows the forecast was £113 million higher than outturn, an error of 74 per cent. This is nearly all because the forecast was for a full year but expenditure was not devolved until September 2018. At the time the forecast was produced the Scottish Government had announced that CA spending would be devolved by summer 2018, and we did not make any assumption as to precisely when this would occur. If we compare outturn against a part-year version of the December 2017 forecast, derived using the same method as for the Block Grant Adjustment, then the remaining error is only 2.6 per cent, or £4 million.
- 5.10** Figure 5.1 shows how our CA forecasts have developed over time. The December 2017 and May 2018 forecasts were produced on a full year basis, but the chart shows the devolved share of the year in solid colour for comparison against later forecasts. Figure 5.1 shows that there has not been much change in the forecast, other than for the timing of devolution.

⁴⁹ OBR historic averages of one-year ahead Carer's Allowance forecast error from June 2010 to March 2018

Figure 5.1: Scottish Carer’s Allowance forecasts and outturn data for 2018-19



Source: Scottish Fiscal Commission (2019) Scotland’s Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland’s Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2017) Scotland’s Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished expenditure data.

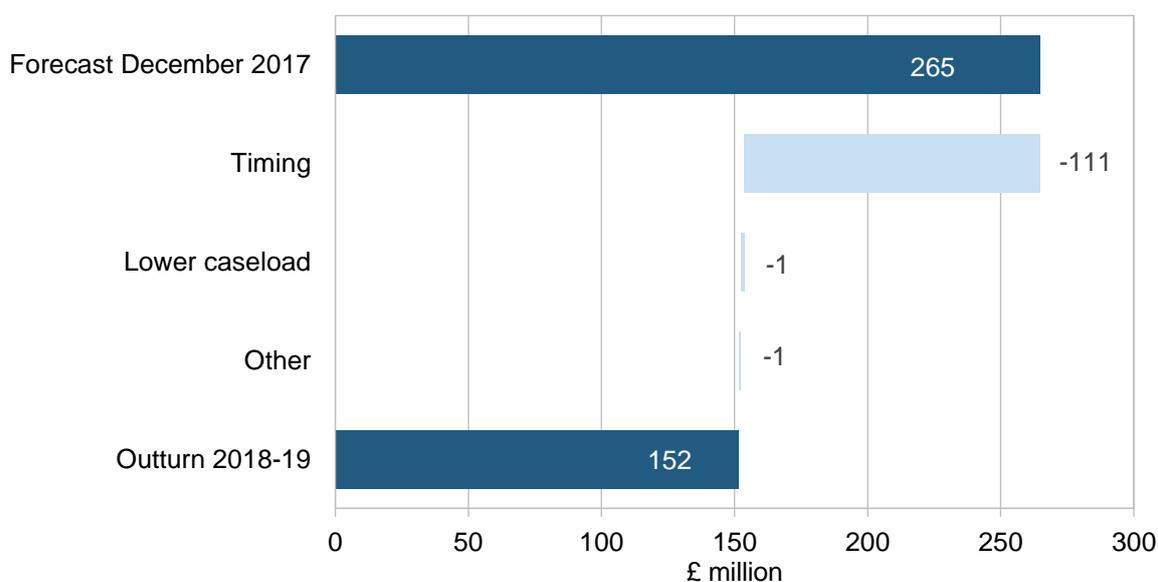
Understanding our forecast error

5.11 Figure 5.2 shows a decomposition of the forecast error for Carer’s Allowance. Putting the large impact of the timing of devolution to one side, there is then a small error of around £1 million associated with our caseload forecast⁵⁰. The reported caseload for the second half of 2018-19 was 0.8 per cent lower than in our December 2017 forecast model.⁵¹ However the gap between the expenditure implied by the statistical data and the financial data reported by DWP has widened since the 2016-17 data which informed our December 2017 forecast. This means the true caseload position may in fact be slightly higher than our forecast.

⁵⁰ This is smaller than the £4 million quoted earlier as here we have used more recent data that was not available for the December 2017 forecast.

⁵¹ Department for Work and Pensions (2019), Stat-Xplore ([link](#))

Figure 5.2: Decomposition of December 2017 CA forecast error for 2018-19



Source: Scottish Fiscal Commission, Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished expenditure data. Figures may not sum because of rounding.

5.12 This leaves a remaining unattributed error of less than £1 million, or around 0.4 per cent of the outturn. This is within the normal range that we might expect for a benefit where the gap between financial outturn data and the cost implied by statistical data can vary by more than a percentage point from one year to the next.

5.13 We think it is likely that when more detailed financial information is available this residual error will reflect that downward accounting adjustments are larger than in previous years, and that these adjustments may be concentrated in the second half of the financial year.⁵² The National Audit Office (NAO) found that in 2018-19 DWP identified over twice as many overpayments as the average for the preceding five years. The value of overpayments referred to debt management in 2018-19 was more than double the level in 2016-17, which was the last year of expenditure data to have informed our December 2017 forecast.⁵³

5.14 The NAO report also indicates that this activity was weighted towards the second half of the financial year, as DWP's new Verification of Earnings and Pensions system was not introduced until September 2018. This could mean that the reduction in net expenditure associated with the identification of new overpayments has a disproportionate downward effect on devolved expenditure.

⁵² Audited accounts for Social Security Scotland, and DWP's annual publication of geographical and monthly breakdowns of benefit expenditure.

⁵³ National Audit Office (2019), Investigation into Overpayments in Carer's Allowance ([link](#)), see Figures 3 and 12.

Conclusions

- 5.15 The large forecast error for CA had no fiscal consequences, as the corresponding Block Grant Adjustment was not made until the September start date was known. This evaluation does illustrate the scale of error that can result if our assumptions on the timing of devolution or on the launch dates for new benefits prove to be wrong.
- 5.16 The residual error also illustrates that some degree of uncertainty can remain even once a full set statistics is available. We are likely to face similar issues and uncertainties on a larger scale when expenditure on disability benefits is devolved.

Carer's Allowance Supplement

Table 5.3: Headline evaluation – Carer's Allowance Supplement December 2017 forecast of 2018-19

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--|---------------------|-------------------|--------------------|
| 35 | 35 | 0.0 | -0.1 |
| Historic averages from OBR⁵⁴ | | | |
| Average error | | | -0.4 |
| Average absolute error | | | 3.0 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Government unpublished expenditure data.

Figures may not sum because of rounding.

5.17 Our Carer's Allowance Supplement error was small at -0.1 per cent. Our first two forecasts had errors of -0.1 per cent, but this rose to 0.8 per cent and 2.8 per cent respectively in our later December 2018 and May 2019 forecasts. The drop between the December 2017 and December 2018 forecast was because of changes to the policy design, as set out below. Our May 2019 forecast simply stated a provisional outturn figure of £34 million from the Scottish Government, which tallied with the statistics that were available at the time.⁵⁵ The outturn quoted here is around £1 million higher because it now includes payments made to people whose eligibility in October 2018 was retrospectively identified in early 2019-20.

Understanding our forecast error

5.18 Around £0.3 million of our original forecast error can be attributed to details of the final policy design. Our December 2017 forecast was modelled as if all claimants would have their CA topped up to the level of Jobseeker's Allowance throughout the year. The eventual policy design was to pay the top-up in 26 week blocks to people who were receiving CA on two particular dates in April and October. Caseload was expected to rise through the year, so this reduced our forecast slightly, by linking expenditure to the caseload at the start and mid-point of the financial year, and by effectively paying the top-up for 364 days of the year, rather than 365 as assumed in our original model.

5.19 These policy design effects are almost exactly offset by a slightly higher number of payments than was implied in the December forecast. Allowing for the change in policy design, the December 2017 forecast was for 156,000 payments to be made, but the latest statistics show a total of 158,000, of

⁵⁴ OBR historic averages of one-year ahead Carer's Allowance forecast error from June 2010 to March 2018

⁵⁵ Scottish Government (2019) Carer's Allowance at November 2018 and Carer's Allowance Supplement, October eligibility date 2018 ([link](#))

which around 4,000 had eligibility in 2018-19 that was not identified until the scan conducted in early 2019-20.⁵⁶

Conclusions

5.20 The significant number of backdated payments made after the end of the financial year highlight the importance of having full information on the technical implementation and accounting treatment of new policies.

⁵⁶ Scottish Government (2019) Carer's Allowance at February 2019 and Carer's Allowance Supplement, April eligibility date 2019 ([link](#))

Discretionary Housing Payments

Table 5.4: Headline evaluation – Discretionary Housing Payments December 2017 forecast of 2018-19

| | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|--------------------------------|-------------------------|------------------------|----------------------|-----------------------|
| Discretionary Housing Payments | 61 | 62 | -1 | -1 |
| <i>of which:</i> | | | | |
| Bedroom Tax Mitigation | 50 | 53 | -3 | -5 |
| Other [1] | 11 | 9 | 2 | 19 |

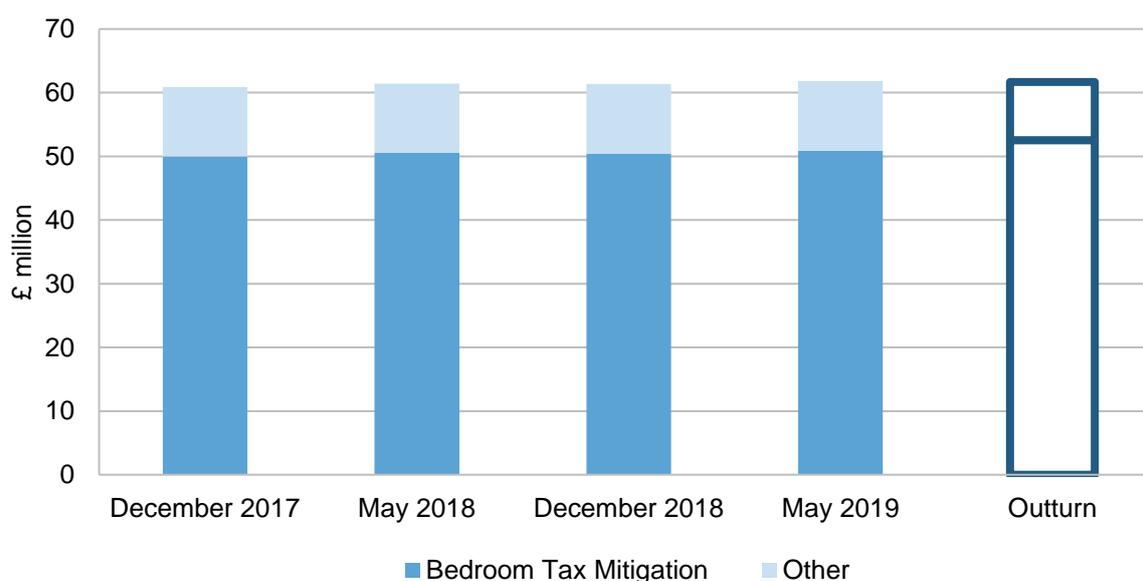
Source: Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Government, unpublished expenditure data.

Figures may not sum because of rounding.

[1] The total outturn quoted for 2018-19 is net of around £1.7 million of 'recovered funding'. Local Authorities spent £9.9 million on payments for reasons other than bedroom tax mitigation but some of this was above their individual allocations, reducing the cost to the Scottish Government to £9.2 million.

- 5.21 Our total forecast error for Discretionary Housing Payments was -1 per cent, but we concentrate here on the -5 per cent error for payments awarded to mitigate the bedroom tax. For the other spend our forecast simply stated the budget that had been allocated to Local Authorities by the Scottish Government. We do not assess the demand for the discretionary fund or whether the funding from the Scottish Government is reasonable.
- 5.22 Figure 5.3 shows that our forecasts have increased over time in response to new data, but that most of the error for bedroom tax mitigation was still present in our May 2019 forecast.

Figure 5.3: DHP forecasts and outturn data for 2018-19



Source: Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished expenditure data.

Understanding our forecast error

- 5.23** Without detailed data on the number of Universal Credit (UC) claims that are subject to a bedroom tax deduction we cannot fully decompose the forecast error, but we can identify two likely factors which explain most of the error.
- 5.24** Firstly, our December 2017 forecast assumed a flat caseload, starting from an estimate based on caseload statistics for mid-2017.⁵⁷ Between August 2017 and the end of 2018-19, State Pension age for women rose from around 64 to a little over 65.⁵⁸ The bedroom tax only applies to working age people so rising State Pension age increases its scope and means that more people aged 64 or 65 are now affected by the bedroom tax than in 2017.
- 5.25** Housing Benefit statistics indicate that compared to the August 2017 data which informed our December 2017 forecast, the number of 64 and 65 year olds with a deduction rose from around 200 to over 2,000.⁵⁹ If the number of claimants at all other ages had remained constant as assumed, then this would explain £1.4 million of the forecast error.
- 5.26** Secondly, our December 2017 forecast assumed that the average size of the deductions would increase by 2.5 per cent in 2018-19, based on recent

⁵⁷ Statistics to August 2017 for Housing Benefit cases with a deduction, and to June 2017 for Universal Credit cases in the social rented sector.

⁵⁸ Department for Work and Pensions (2014), State Pension age timetable ([link](#))

⁵⁹ Department for Work and Pensions (2019) Stat-Xplore ([link](#)),

growth in social rents. We do not have data for UC, and social housing statistics for 2018-19 are not yet available, so we cannot be sure of the true increase, but Housing Benefit data and the planned rent increases reported to the Scottish Housing Regulator suggest that average deductions and social rents grew by around 3 per cent, contributing £0.4 million to the total error.⁶⁰

5.27 This leaves nearly £1 million of error which cannot be attributed to these two effects. This is equivalent to roughly 1,500 cases receiving payments to mitigate bedroom tax deductions for a full year. Over 2018-19 the average number of households on UC in the social rented sector was nearly 50,000 so 1,500 cases would represent a 3 percentage point variation in the proportion of UC claimants that are subject to a bedroom tax deduction.⁶¹ This is within the sort of range of variation that we might reasonably expect to see between Housing Benefit and UC when statistics become available.

Conclusions

5.28 For our next forecast we will incorporate the ongoing increase in State Pension age into our model and refine our estimates of the proportion of UC claimants that are subject to a bedroom tax deduction.

⁶⁰ Department for Work and Pensions (2019) Stat-Xplore ([link](#)), Scottish Housing Regulator (2018) Charter indicators and data by outcomes and standards ([link](#)).

⁶¹ Department for Work and Pensions (2019) Stat-Xplore ([link](#))

Best Start Grant

Table 5.5: Headline evaluation – Best Start Grant September 2018 forecast of 2018-19

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|----------------------|---------------------|-------------------|--------------------|
| 1.7 | 4.3 | -2.5 | -59 |

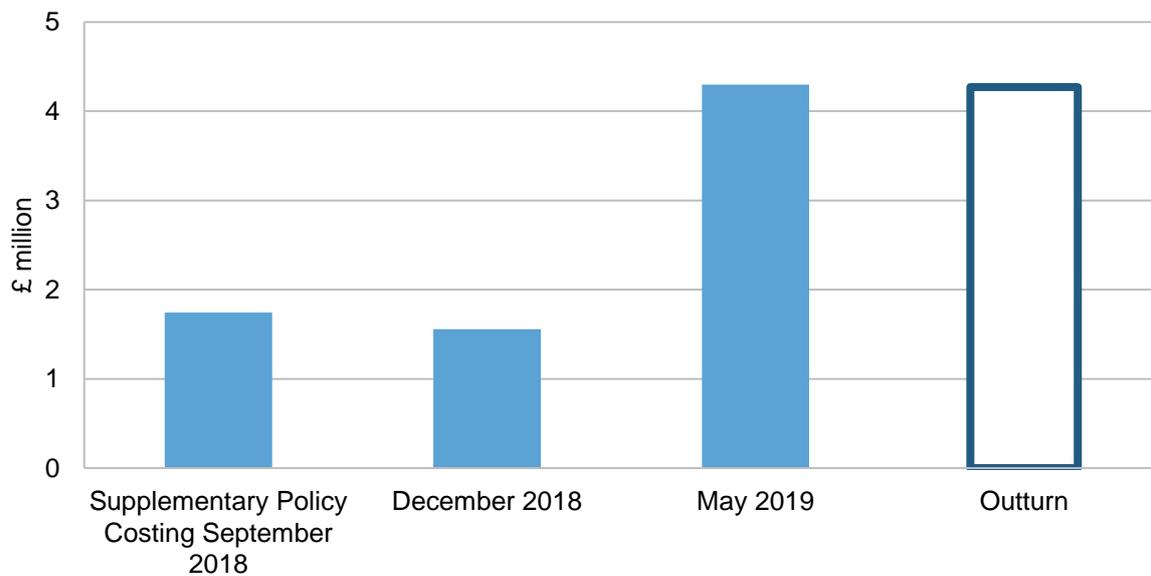
Source: Scottish Fiscal Commission (2018) Supplementary Costing – Social Security – Best Start Grant (Pregnancy and Baby Payment) – September 2018 ([link](#)), Scottish Government unpublished expenditure data. Figures may not sum because of rounding.

5.29 Best Start Grant (BSG) was launched in December 2018, and during 2018-19 only consisted of the Pregnancy and Baby Payment. Our December 2017 forecast was for Sure Start Maternity Grant, which Best Start Grant has now replaced. The comparison here is against the supplementary policy costing we produced in September 2018 to accompany the relevant secondary legislation.⁶² Our forecast error was -59 per cent, with outturn more than twice the forecast.

5.30 Figure 5.4 shows how our forecasts developed over time compared to the outturn data. At December 2018 we slightly reduced the forecast to account for the announced start date of 10 December, but then made an increase in May 2019 in light of the larger than expected number of claims that were received.

⁶² The policy costing showed two scenarios for start dates on 1 November or 1 December 2018. The eventual start state was 10 December, and here we compare against the 1 December version of the costing.

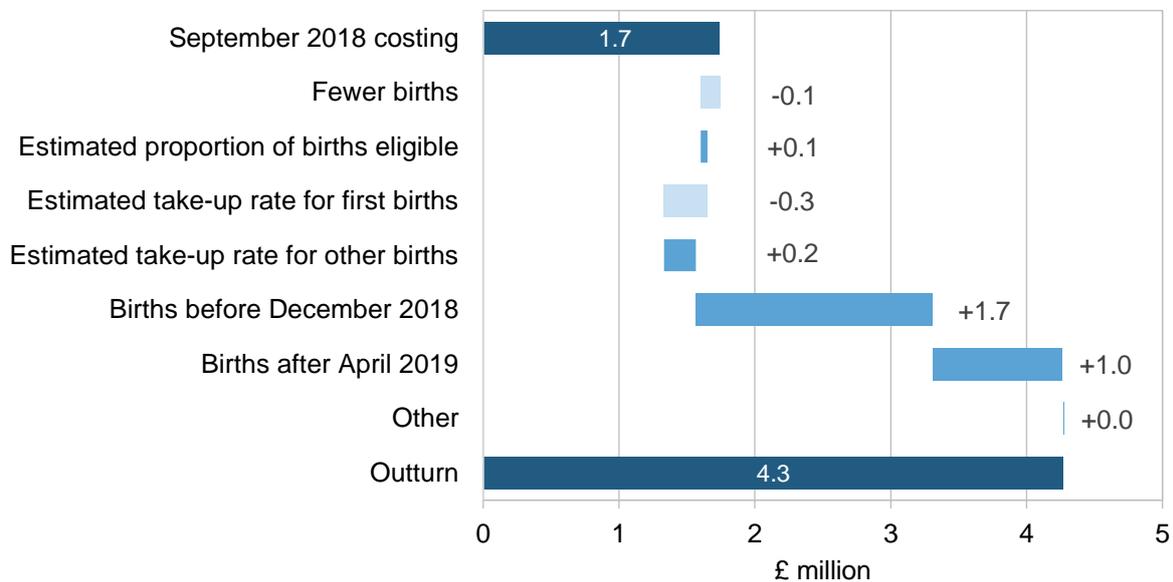
Figure 5.4: Best Start Grant forecasts and outturn data for 2018-19



Source: Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished expenditure data.

Understanding our forecast error

Figure 5.5: Decomposition of September 2018 BSG forecast error for 2018-19



Source: Scottish Fiscal Commission, Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished management information and expenditure data.

5.31 There is a small decrease of £0.1 million resulting from there being around 8 per cent fewer births during 2018-19 than were projected by ONS.

- 5.32 In the original costing we assumed that claims would be received for births covering a span of four months, with 46 per cent of births being eligible. Our latest estimate of eligibility is 48 per cent, accounting for an increase of around £0.1 million.
- 5.33 In the original costing we assumed take-up of 47 per cent over the four month window of births, leading to around 4,000 payments. In fact over 4,000 applications were received on the first day, and 11,500 awards were authorised in 2018-19, leading to expenditure that was more than double our forecast.
- 5.34 This higher take-up was in part because of promotion of the new benefit by the Scottish Government, leading to claims from new parents whose babies were born between June and December 2018 who could have claimed Sure Start Maternity Grant (SSMG) before December, but were also within the six month window for BSG claims. It is also possible that some claims which would not otherwise have been made until 2019-20 under the SSMG system were brought forward into 2018-19, either because of the additional publicity, or because of the slightly wider window in which claims can be made.⁶³
- 5.35 The important thing to understand for our forecasts is how much of the error represents a higher rate of ongoing take-up and how much is a one-off effect of the publicity around the new benefit. To understand this we have used management information from Social Security Scotland which splits awards by the month of birth and between first births and subsequent births.
- 5.36 The decomposition in Figure 5.5 illustrates how this information affects our estimate of take-up for children born between December and March, with lower take-up for first births and higher for subsequent births. This was incorporated in the updated take-up assumptions in our May 2019 forecast.
- 5.37 We then attribute the rest of the error as £1.7 million to births before December 2018, and £1.0 million to payments claimed in 2018-19 for births not due until 2019-20. This is a slightly stylised analysis, as it is likely that without devolution some SSMG claims would have been made between December and March for births outside this four month window, and vice versa. We assume here that these effects would roughly cancel out.
- 5.38 We may be able to take a firmer view of how many BSG payments were as a result of people delaying the claims that they would otherwise have made for SSMG once we receive outturn data for 2018-19 from DWP.

⁶³ Sure Start Maternity Grant cannot be claimed until 11 weeks before the baby is due, but Best Start Grant can be claimed from the 24th week of pregnancy.

Conclusions

- 5.39 The large error here shows the importance of understanding how information about new benefits is disseminated, and the potential for forecast error where benefit eligibility relates to a one-off event but has a relatively long period during which a claim can be made.
- 5.40 Our May 2019 forecast has already taken account of the apparent higher take-up for second and subsequent births, but we will also try to ensure that future forecasts, and our models for similar benefits, take account of how the timing of claims and payments relate to the underlying life events.

Employability Services

Table 5.6: Headline evaluation – Employability Services December 2017 forecast of 2018-19

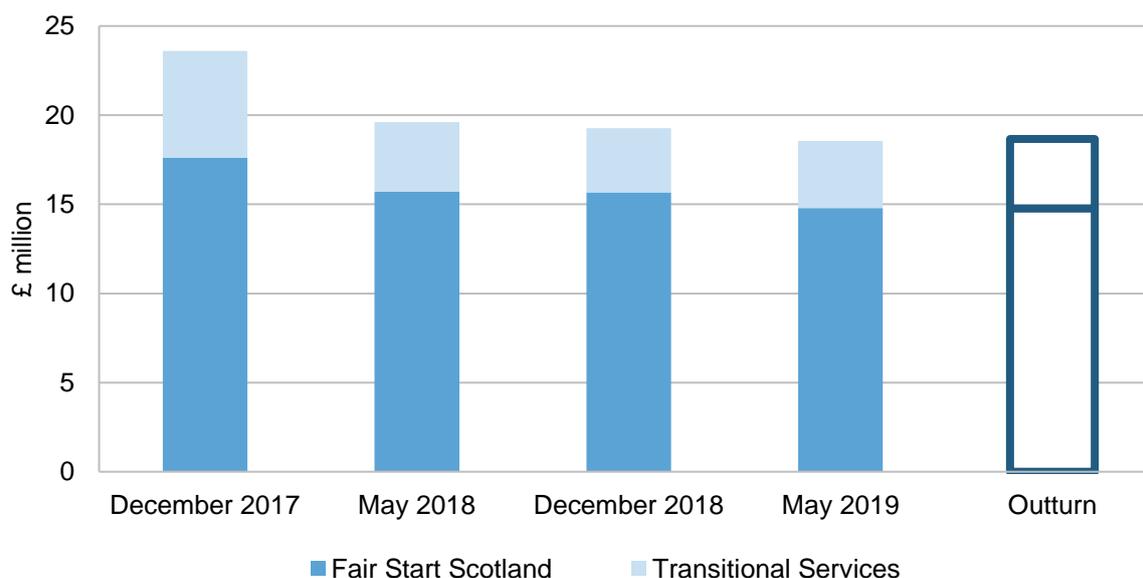
| | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|------------------------|-------------------------|------------------------|----------------------|-----------------------|
| Employability Services | 24 | 19 | 5 | 26 |
| <i>of which</i> | | | | |
| Fair Start Scotland | 18 | 15 | 3 | 19 |
| Work Able Scotland | 0.3 | 0.3 | 0.0 | 19 |
| Work First Scotland | 5.7 | 3.6 | 2.1 | 57 |

Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Government, unpublished expenditure data.

Figures may not sum because of rounding.

- 5.41** Employability services consist of two transitional services, Work Able Scotland and Work First Scotland, which accepted referrals during 2017-18, and the larger Fair Start Scotland service. This started in 2018-19 and will take referrals until the end of 2020-21. The service is run by providers who are paid according to the number of people that move into sustained employment, with performance fees paid when participants reach 13, 26 and 52 weeks of sustained employment.
- 5.42** Spending on all three services in 2018-19 was below our December 2017 forecast. Our total error across all three services was 26 per cent, with forecasts exceeding outturn by £5 million.
- 5.43** Figure 5.6 shows how our forecasts changed and a comparison to the outturn data.

Figure 5.6: Employability Services forecasts for 2018-19 and outturn data



Source: Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – December 2018 ([link](#)), Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#)), Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts – December 2017 ([link](#)), Scottish Government unpublished expenditure data.

5.44 From Figure 5.6 we can see that between December 2017 and May 2018 our forecast for Fair Start Scotland was reduced by around £2 million. The forecast relied in large part on forecasts for realised job outcomes from service providers. In December 2017, these were submitted to the Scottish Government as part of the tendering process.⁶⁴ These forecasts were revised most significantly in May 2018 and continued to be lowered thereafter as newer data became available.

Understanding our forecast error

5.45 For both of the transitional services, expenditure was lower because providers achieved fewer job outcomes than expected. It is possible that this was in part caused by the start of the larger Fair Start Scotland programme, which may have to some extent drawn from the same pool of potential participants.

5.46 For Fair Start Scotland, expenditure has a fixed cost element, set to pay out roughly 30 per cent of the expected expenditure over the lifetime of the programme as a regular service fee. Forecast error on this element is minimal. The performance related element awards payments to providers when job outcomes are achieved. This element was always expected to be relatively small in 2018-19 as there was relatively little opportunity during the

⁶⁴ Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts, page 172 contains details on the modelling approach ([link](#)).

first year of the programme for significant numbers of people to reach the 26 week or 52 week outcomes. Table 5.7 shows the forecast error broken down between the service and performance elements.

Table 5.7: Fair Start Scotland forecast error split between service fees and performance fees

| | Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|---------------------|-------------------------|------------------------|----------------------|-----------------------|
| Fair Start Scotland | 18 | 15 | 3 | 19 |
| <i>of which:</i> | | | | |
| Service Fees | 14 | 14 | 0 | 1 |
| Performance Fees | 4 | 1 | 3 | 272 |

Source: Scottish Fiscal Commission, Scottish Government unpublished expenditure data.

- 5.47 Table 5.7 shows that the £3 million error, while small in absolute terms, represents a very large relative error in the forecast of expenditure on performance fees.
- 5.48 Around two thirds of this error can be explained by the difference between our December 2017 and May 2018 forecasts. Our May 2018 forecast was informed by service providers' own estimates of the pace at which they would achieve job outcomes.⁶⁵ This information was not available when the programme was being developed in 2017, and the error from the point when more detailed plans were known is only £1 million.
- 5.49 This remaining £1 million error can be attributed to a combination of a lower number of starts than forecast, a greater proportion of those who do start being in the groups which attract lower performance fees, and to job outcomes being achieved for a lower proportion of these than providers had expected in 2018-19.
- 5.50 We have not derived a detailed decomposition of these effects. On the number of people joining Fair Start Scotland, statistics published by the Scottish Government indicate that the total number of people who started on the service in the first year was just over 10,000, roughly 20 per cent below the original forecast of 12,600.⁶⁶ This accounted for roughly a £1 million reduction, as discussed in our May 2019 forecast publication.⁶⁷
- 5.51 Management information from the Scottish Government indicates that by April 2018, nearly 40 per cent of participants were in the Core group⁶⁸ who attract lower job outcome payments, compared to an assumption of 14 per cent in

⁶⁵ Scottish Fiscal Commission (2018) Scotland's Economic and Fiscal Forecasts – May 2018 ([link](#))

⁶⁶ Scottish Government (2019), Scotland's Devolved Employment Services: Statistical Summary ([link](#))

⁶⁷ Scottish Fiscal Commission (2019) Scotland's Economic and Fiscal Forecasts – May 2019 ([link](#))

⁶⁸ The service is designed around individual customer need but there are three broad categories of service provided – Core, Advanced and Intense – with the performance fees rising with the level of service.

the December forecast.⁶⁹ As discussed in our May forecast, having more people in the Core group leads to a net reduction in expenditure, as providers receive greater financial rewards for supporting the participants who are furthest removed from the labour market. The lower job outcome fees are only partly offset by the higher proportion of the Core group that are expected to find sustained employment.

Conclusions

- 5.52 It is clear that our December 2017 forecast overestimated the amount spent on employability services. We are still at an early stage in terms of realised job outcomes, so can only draw limited preliminary conclusions.
- 5.53 The first is that we will review our forecast that the policy ambition of 38,000 people starting the service will be achieved. By the end of 2018-19, just over 10,000 people had started compared to more than 12,000 in the December 2017 forecast.⁷⁰ We will continue to monitor this with the Scottish Government, and we note that we have only had outturn data for the first year of a service where we would expect the outcomes to mature over time. However, should this situation persist, we will need to revise our forecast downwards.
- 5.54 Second, we will review with the Scottish Government and service providers their expectations for the proportion of participants who will fall into the different service level groups.
- 5.55 Third, we expect to have some further data on realised job outcomes. While we will not have as much evidence for these as for the first two points, we will work with the Scottish Government to analyse the implications of the incoming data for our forecast.

⁶⁹ Scottish Government, unpublished data

⁷⁰ Scottish Government (2019), Scotland's Devolved Employment Services: Statistical Summary ([link](#))

Healthy Start Vouchers

Table 5.8: Headline evaluation – Healthy Start Vouchers December 2017 forecast of 2018-19

| Forecast (£ million) | Outturn (£ million) | Error (£ million) | Error (Relative %) |
|----------------------|---------------------|-------------------|--------------------|
| 4.0 | 3.7 | 0.2 | 7 |

Source: Source: Scottish Fiscal Commission (2017) Scotland's Economic and Fiscal Forecasts December 2017 ([link](#)), Scottish Government unpublished expenditure data.

Figures may not sum because of rounding.

- 5.56** Healthy Start Vouchers were not devolved in 2018-19, but were funded through the Scottish Government budget.⁷¹ They could be claimed by some pregnant women and for children under four living in households in receipt of a qualifying benefit.
- 5.57** Our forecast error was 7 percent, or £0.2 million. Nearly half of this error is because the population of children under four was lower than had been projected by ONS, with this difference driven by lower numbers of births in both 2017-18 and 2018-19.
- 5.58** The small residual error of £0.1 million represents differences in the proportion of relevant households that were eligible and in the proportion of those eligible who actually claimed the vouchers.

⁷¹ From 12 August 2019 Healthy Start Vouchers are being replaced by Best Start Foods, a new benefit delivered by Social Security Scotland.



Abbreviations

| | |
|-------|---|
| AA | Attendance Allowance |
| ADS | Additional Dwelling Supplement |
| APD | Air Passengers Duty |
| APS | Annual Population Survey |
| ASHE | Annual Survey of Hours and Earnings |
| AWE | Average Weekly Earnings |
| BGA | Block Grant Adjustment |
| BMW | Biodegradable Municipal Waste |
| BRIS | Business Rates Incentivisation Scheme |
| BSG | Best Start Grant |
| CA | Carer's Allowance |
| CAA | Civil Aviation Authority |
| CBI | Confederation of British Industry |
| COSLA | Convention of Scottish Local Authorities |
| CPI | Consumer Price Index |
| DHP | Discretionary Housing Payment |
| DLA | Disability Living Allowance |
| DWP | Department for Work and Pensions |
| ESA | Employment and Support Allowance |
| EU | European Union |
| FEA | Funeral Expense Assistance |
| FEP | Funeral Expenses Payment |
| FOI | Freedom of Information |
| FSS | Fair Start Scotland |
| FTB | First Time Buyers |
| GDP | Gross Domestic Product |
| GERS | Government Expenditure & Revenue Scotland |
| HMRC | Her Majesty's Revenue and Customs |
| HSV | Healthy Start Vouchers |
| IFI | Independent Fiscal Institution |
| IPS | International Passenger Survey |
| JSA | Jobseeker's Allowance |
| LBTT | Land and Buildings Transaction Tax |
| LHA | Local Housing Allowance |
| LFS | Labour Force Survey |
| MCC | Material Change of Circumstances |
| MTFS | Medium Term Financial Strategy |

| | |
|------|--|
| NAO | National Audit Office |
| NDR | Non-Domestic Rates |
| NDRi | Non-Domestic Rates Income |
| NPD | Non-Profit Distributing |
| NPV | Net Present Value |
| NRS | National Records of Scotland |
| NSND | Non-Savings and Non-Dividends |
| OBR | Office for Budget Responsibility |
| OECD | Organisation for Economic Co-operation and Development |
| ONS | Office for National Statistics |
| PAYE | Pay As You Earn |
| PIP | Personal Independence Payment |
| PMI | Purchasing Managers' Index |
| PSM | Policy Simulation Model |
| PUT | Public Use Tape |
| QNAS | Quarterly National Accounts Scotland |
| RDF | Refuse Derived Fuel |
| RHDI | Real Household Disposable Income |
| RPI | Retail Price Index |
| RTI | Real Time Information |
| RV | Rateable Value |
| SAA | Scottish Assessors Association |
| SCC | Scottish Chambers of Commerce |
| SDLT | Stamp Duty Land Tax |
| SEFF | Scotland's Economic and Fiscal Forecasts |
| SEPA | Scottish Environmental Protection Agency |
| SFC | Scottish Fiscal Commission |
| SG | The Scottish Government |
| SLfT | Scottish Landfill Tax |
| SPI | Survey of Personal Incomes |
| SSMG | Sure Start Maternity Grant |
| SWF | Scottish Welfare Fund |
| UC | Universal Credit |
| UKF | UK Finance |
| VAT | Value Added Tax |

A full glossary of terms is available on our website:

<http://www.fiscalcommission.scot/about-us/glossary-of-terms/>

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