

Approach to Forecasting Social Security September 2018

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Introduction

1. This report sets out the Scottish Fiscal Commission's intended approach to forecasting social security payments. We are committed to openness and transparency in all of our work. By being transparent in our forecasting, we hope to engage users in our approach to help improve our forecasts.
2. The Commission is currently going through a process of developing forecasting models and processes to help fulfil our statutory remit for social security. The approach taken to forecast expenditure varies by benefit and has developed since our first forecasts in December 2017.
3. There are some benefits where no forecast models are required as we are informed of the Scottish Government's funding plans for the local authorities which we use as our forecasts. Examples of this are the Scottish Welfare Fund and the funding for Discretionary Housing Payments other than the payments used to mitigate the Bedroom Tax.
4. For the employability services, our forecasts to date have relied on information from the Scottish Government. The employability services are delivered by a number of providers who are paid in part according to their performance. The Scottish Government's ability to influence these performance related payments means that our forecasts will always be reliant, to an extent, on delivery information from the Scottish Government.
5. For other benefits we reviewed and developed the models initially created by analysts in the Scottish Government.
6. Forecasting is an on-going process of intelligence gathering, learning from previous forecasts, reflection and refinement. As with all our forecast models, our approach for social security will continue to evolve. We will develop and improve forecasts in light of experience and the availability of new information sources, for example as Social Security Scotland collect and publish data. We will work with analysts in the Scottish Government as we develop forecasting methodologies reflecting changes that Scotland may make following the devolution of each benefit.
7. We aim to present informed and transparent forecasts. In doing so, the Commission recognises that forecasts will be subject to forecasting error. For example, the take-up of certain benefits may not be entirely as predicted or input data may be revised. Forecasting is an iterative process and we aim to clearly explain changes we make from one set of forecasts to the next.
8. All charts and tables in this publication have also been made available in spreadsheet form on our website.¹ If you have any feedback, or would like to request further information about any of our analysis, please email info@fiscalcommission.scot

¹ Scottish Fiscal Commission Occasional Papers ([link](#))


Our role in forecasting social security expenditure

9. We are Scotland's independent official forecaster. Our forecasts are used to set the Scottish Government's budget for social security expenditure for the next financial year. Our forecasts cover expenditure on the benefits or programmes but do not cover the associated administrative costs, such as the cost of setting up and running Social Security Scotland, as these are determined by the Scottish Government.
10. In accordance with our regulations, we produce forecasts for the social security benefits devolved under the Scotland Act 2016, Welfare Foods, the Scottish Welfare Fund and Employability Services.²

The Scotland Act 2016




11. The Scotland Act 2016 devolved a number of social security benefits to Scotland. The Scottish Parliament passed the Social Security (Scotland) Bill in June 2018 and this sets out principles and a general framework for Scottish social security following the devolution of benefits covered by the Scotland Act 2016.³ Details of these benefits are shown in Table 1.




Table 1: Scotland Act 2016 benefit overview

Benefit	Overview
 III Health and Disability Benefits: Attendance Allowance	Help with extra costs for individuals aged 65 or over with a physical or mental disability severe enough that they need someone to help look after them.

² Scottish Fiscal Commission Act 2016 ([link](#))

³ Social Security (Scotland) Act (2018) ([link](#))




Benefit	Overview
Disability Living Allowance	<p>Adults: Payments for disabled people who need help with mobility or care costs. Personal Independence Payment is replacing Disability Living Allowance for disabled people aged 16 to 64. Individuals in receipt of Disability Living Allowance and who were aged 65 or on or before 8 April 2013 are unaffected by the introduction of Personal Independence Payment.</p> <p>Children: Payments to help with the extra costs of looking after a child who is under 16 and has difficulties walking or needs much more looking after than a child of the same age who doesn't have a disability.</p>
Industrial Injuries Disablement Benefit	Support for individuals who are ill or disabled because of an accident or disease at work or while on an approved employment training scheme or course.
Personal Independence Payment	Help with some of the extra costs caused by long term ill-health or disability for individuals who face difficulties with daily living, mobility or both. Individuals must be aged 16 to 64 at the time of the claim.
Severe Disablement Allowance	Financial support for individuals who are unable to work due to severe disability. This has now been replaced by Employment and Support Allowance (ESA) so there are no new claims. Individuals who made a claim prior to the introduction of ESA and reached the pension aged before 6 April 2014 can continue to receive payments.
 Carers Allowance	Help for an individual looking after someone with substantial caring needs. To be eligible the individual must be 16 or over and spend at least 35 hours a week caring for them.
 Best Start Grant (replacing the Sure Start Maternity Grant)	One-off payments to help individuals who are in receipt of certain benefits with the costs of having a child, their child starting nursery and their child starting school.
 Funeral Expense Assistance (replacing Funeral Payments)	Help for individuals on low income who need help to pay for a funeral they are arranging.

Benefit	Overview
	<p>Cold Weather Payments</p> <p>A payment for individuals in receipt of certain income related benefits when the temperature in their area is either recorded as, or forecast to be, an average of zero degrees Celsius or below over seven consecutive days.</p>
	<p>Winter Fuel Payments</p> <p>A payment to help pay for heating bills for individuals born on or before a specified date. For winter 2018-19, the date is 5 July 1953.</p>
	<p>Discretionary Housing Payments</p> <p>Additional support to meet housing costs for individuals in receipt of Housing Benefit or the housing costs element of Universal Credit. Paid at the discretion of local authorities.</p>

Role of the SFC

12. In addition to the benefits devolved under the Scotland Act 2016, we also forecast expenditure for the following benefits:

Table 2: Additional benefits in the SFC’s scope for social security

Benefit	Overview
	<p>Welfare Foods</p> <p>Welfare Foods consists of 2 schemes:</p>
	<p>The Healthy Start Scheme provides vitamins and financial support to purchase nutritious food to pregnant women and families on low incomes. Healthy Start Vouchers will be replaced by Best Start Foods when it is devolved to Scotland.</p>
	<p>The Nursery Milk Scheme entitles children under 5 to receive a drink of cow’s milk or formula milk on the days where they attend early learning and childcare.</p>
	<p>Employability</p> <p>Voluntary services introduced by the Scottish Government to provide employability support to help the long-term unemployed and people with disabilities to find sustainable employment.</p>
	<p>Scottish Welfare Fund</p> <p>The Scottish Welfare Fund provides Community Care Grants, which help people to live independently, and Crisis Grants, which provide a safety net in a disaster or emergency. Paid at the discretion of local authorities.</p>

13. The Scottish Parliament also has the power to top up reserved benefits or introduce new benefits.⁴ We will produce forecasts when the Scottish Parliament chooses to use these powers. Examples of new social security benefits are:
 - The Social Security (Scotland) Act introduced a new Carer's Allowance Supplement. Carers will receive the first payments of the new supplement from mid-September 2018.
 - The Tackling Child Poverty Delivery plan introduced an income supplement for low income families.⁵
14. Other than for the interim Carer's Allowance Supplement which is set out in the Social Security (Scotland) Act 2018, the Scottish Government's intention is to set out all detailed rules relating to eligibility criteria and rates of devolved benefits in secondary legislation. To support the Scottish Parliament and the public in understanding and scrutinising the Scottish Government's policy proposals, we may produce forecasts of expenditure to accompany secondary legislation relating to any areas in our remit. An example of this is our recent costing of the Best Start Grant Pregnancy and Baby Grant to accompany secondary legislation for this benefit.⁶

Model overview

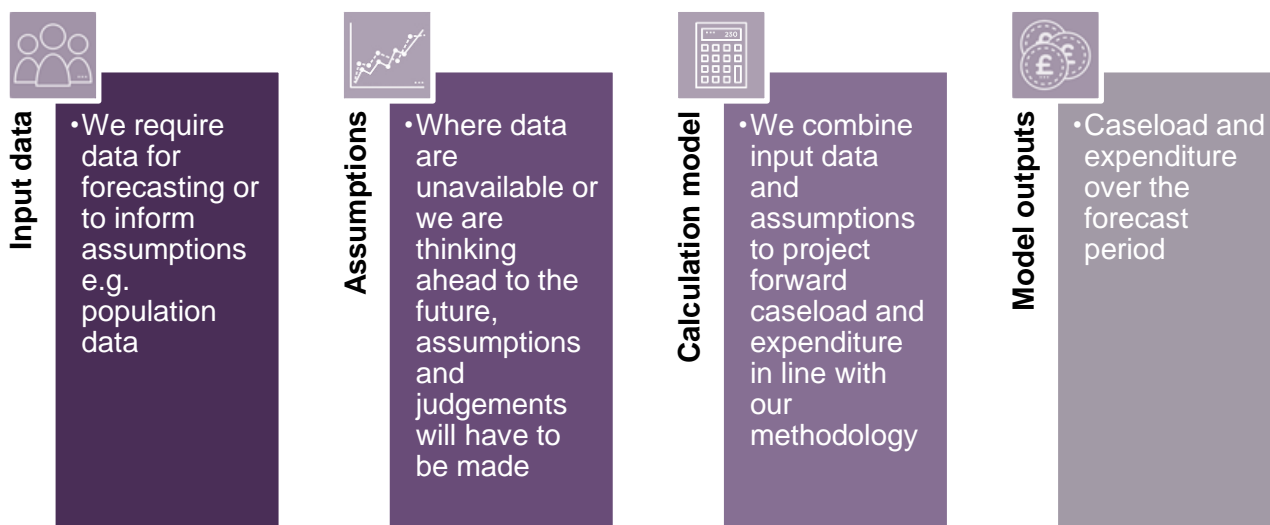
15. Given the complexity of the social security system it is not possible to develop an approach that works universally for all benefits. For each benefit, we develop an approach to determine the number of individuals expected to receive payments and expenditure. We consider each benefit separately when we do this as there are often different factors that affect caseload and expenditure. For example, a factor that we allow for in our Carer's Allowance forecast is gender to reflect societal differences in who takes on caring roles.
16. The main output from our models is forecast expenditure as that is the information required by the Scottish Government to inform their budget. We recognise that other users, including the Scottish Government, may also be interested in our forecasts of the number of people claiming benefits, also known as the caseload. To date, we have only published forecast caseload figures for Carer's Allowance but we will publish caseload figures for all benefits in our remit in the future.
17. Figure 1 shows the basic structure of all our forecast models: input data, assumptions, calculation model and model outputs. Forecasting is an iterative process and we will evolve our choice of input data, assumptions and methodology if we see that the model outputs are out of line with our expectations.

⁴ Reserved benefits refer to social security benefits that will continue to remain the responsibility of the UK Government, for example Universal Credit.

⁵ Scottish Government (2018) Every child, every chance – The Tackling Child Poverty Delivery Plan 2018-22 ([link](#))

⁶ SFC Supplementary Costings – Best Start Grant (Pregnancy and Baby Grant) – September 2018 ([link](#))

Figure 1: Social security model structure



18. The starting point for many of the Commission’s current models were those inherited from the Scottish Government analytical teams. We have also had discussions with the Department for Work and Pensions (DWP) and the Office for Budget Responsibility (OBR) to understand their approach to forecasting social security expenditure for Great Britain. We are grateful to these teams for their input and advice as we develop our own models. An overview of the status of each of our models is provided in Table 3.

Table 3: Status of SFC social security models as at September 2018

Benefit	Model status
Carer’s Allowance	In December 2017, we used a model from the Scottish Government. Since then, we have developed a model to forecast the number of individuals we expect to receive Carer’s Allowance and Carer’s Allowance Supplement over the forecast period. We used this model to produce our May 2018 forecasts for these benefits. We will continue to develop this model in the run up to our next forecasts later in the year.

Benefit	Model status
Discretionary Housing Payments	<p>The Scottish Government has committed to using Discretionary Housing Payments to mitigate the removal of the spare room subsidy (RSRS), commonly known as the ‘Bedroom Tax’. We have developed a model to forecast expenditure used to mitigate the Bedroom Tax. We used this model for our December 2017 and May 2018 publications.</p> <p>There is another component of Discretionary Housing Payment where a fixed amount of money is provided to local authorities to support individuals who need help with housing costs. We do not have a model for this component as we will only be informed of the Scottish Government’s policy intention regarding funding at the Scottish Budget. We assume this funding remains constant over the forecast period unless the Scottish Government confirms otherwise. We do not assess the demand for Discretionary Housing Payments for reasons other than to mitigate the Bedroom Tax.</p>
Best Start Grant	<p>We published a policy costing for Best Start Grant (Pregnancy and Baby Grant) when the secondary legislation for this benefit was laid in the Scottish Parliament. We developed our Sure Start Maternity Grant (the previous UK equivalent benefit) model to reflect the changes we considered relevant to expenditure, such as eligibility and payment amounts. In the future, we expect to make further changes to incorporate nursery and school age payments, which the Scottish Government included in their Best Start Grant consultation.⁷</p>
Welfare Foods	<p><u>Best Start Foods</u> Similar to Best Start Grant, we have completed further development of the model we have been using to forecast expenditure under UK policy so that we can cost Best Start Foods when it is devolved. This model is close to completion and we will refine the model further once final policy details become available.</p> <p><u>Nursery Milk</u> The Scottish Government has not yet confirmed dates or details of devolution. We do not currently forecast expenditure on Nursery Milk. We will develop forecast models once further details become available.</p>

⁷ Scottish Government (2018) Early Years Assistance, Consultation on the Best Start Grant Regulations ([link](#))

Benefit	Model status
Funeral Expense Assistance	<p>We have a model that we have been using to forecast expenditure under current UK policy for our December 2017 and May 2018 publications. We have continued to develop this model further so that we can use it to cost the Scottish Government’s proposed policy for Funeral Expense Assistance. This model is close to completion and we will refine the model further once final policy details become available.</p>
Employability	<p>The employability expenditure forecasts presented in our December 2017 and May 2018 forecast reports were based on data provided by Scottish Government analysts. We are currently working with the Scottish Government to enhance the Commissions’ ownership of future forecasts ahead of our next report.</p>
Scottish Welfare Fund	<p>We do not have a model for the Scottish Welfare Fund. We are informed of the Scottish Government’s policy intention regarding the funding of the Scottish Welfare Fund at the Scottish Budget. We assume this funding remains constant over the forecast period unless the Scottish Government confirms otherwise.</p> <p>Importantly we do not assess the demand for the Scottish Welfare Fund and whether the funding from the Scottish Government is reasonable. In May 2018, the Social Security Committee investigated whether the current level of funding for the Scottish Welfare Fund is adequate.⁸ The output of this review will then be considered by the Scottish Government as part of their funding decisions for the Scottish Welfare Fund.</p> <p>We do not provide further detail on the Scottish Welfare Fund in the remainder of this paper.</p>

⁸ Social Security Committee (2018) Scottish Welfare Fund inquiry ([link](#))

Benefit	Model status
Ill-health and disability benefits	<p>Responsibility for the ill-health and disability benefits to be devolved will transfer to the Scottish Government by April 2020 at the latest.⁹ We have set up a working-group with analysts at the Scottish Government to better understand the factors that will be important in forecasting expenditure and will develop models in advance of the 2020-21 Scottish Budget.</p> <p>Initially these models will be developed to produce expenditure forecasts in line with UK policy. We will review the models once further details are available about the proposed Scottish Government policy so we are able to cost the move from UK policy to Scottish policy.</p>
Cold Weather Payments and Winter Fuel Payments	<p>Similar to ill-health and disability benefits, the Scottish Government will have responsibility for paying Cold Weather Payments and Winter Fuel Payments by April 2020 at the latest.⁹ We will develop forecast models once further details become available.</p>

Data

19. As shown in Figure 1, data are an essential input into our forecasting models. We use a wide variety of data sources in social security modelling, reflecting the range of different benefits that are being devolved to Scotland. The common data that we require for all our forecasts are claimant and expenditure information.
20. Where there is a comparable UK benefit, then we source claimant and expenditure information from DWP. The majority of this information is publicly available from their Stat-Xplore application. Please refer to Box 1 for further information on Stat-Xplore.
21. Once the benefits are devolved to Scotland, and for any new benefits that the Scottish Government may introduce, our key data provider will be Social Security Scotland. Social Security Scotland is the new social security agency for Scotland.
22. For further information on our data needs for social security please refer to our Statement of Data Needs publication.¹⁰

⁹ Explanatory memorandum to the Scotland Act 1998 (Agency Arrangements) (Specification) Order 2018 ([link](#))

¹⁰ Scottish Fiscal Commission (2018) Statement of Data Needs – September 2018 ([link](#))

Box 1: Stat-Xplore

DWP provide an internet browser-based application called Stat-Xplore which allows users to access data for a number of DWP benefits and programmes.¹¹ Anyone can register to use Stat-Xplore and it is free of charge. Users can explore the information that they are interested in for a particular benefit such as geographical location or claimant characteristics like age.

Stat-Xplore currently holds data relating to the following benefits that will be devolved to Scotland:

- Attendance Allowance
- Carer's Allowance
- Disability Living Allowance
- Personal Independence Payment

We use the historic trends we see in claimant data from Stat-Xplore to inform our future forecasts for these benefits. There is often a six month lag in data becoming available on Stat-Xplore. For example, the number of individuals in receipt of Carer's Allowance in August 2018 will not be available until February 2019. The lag is shorter for Personal Independence Payment.

Statistical disclosure control is applied with Stat-Xplore, which guards against the identification of an individual claimant.

¹¹ DWP Stat-Xplore ([link](#))



Carer's Allowance

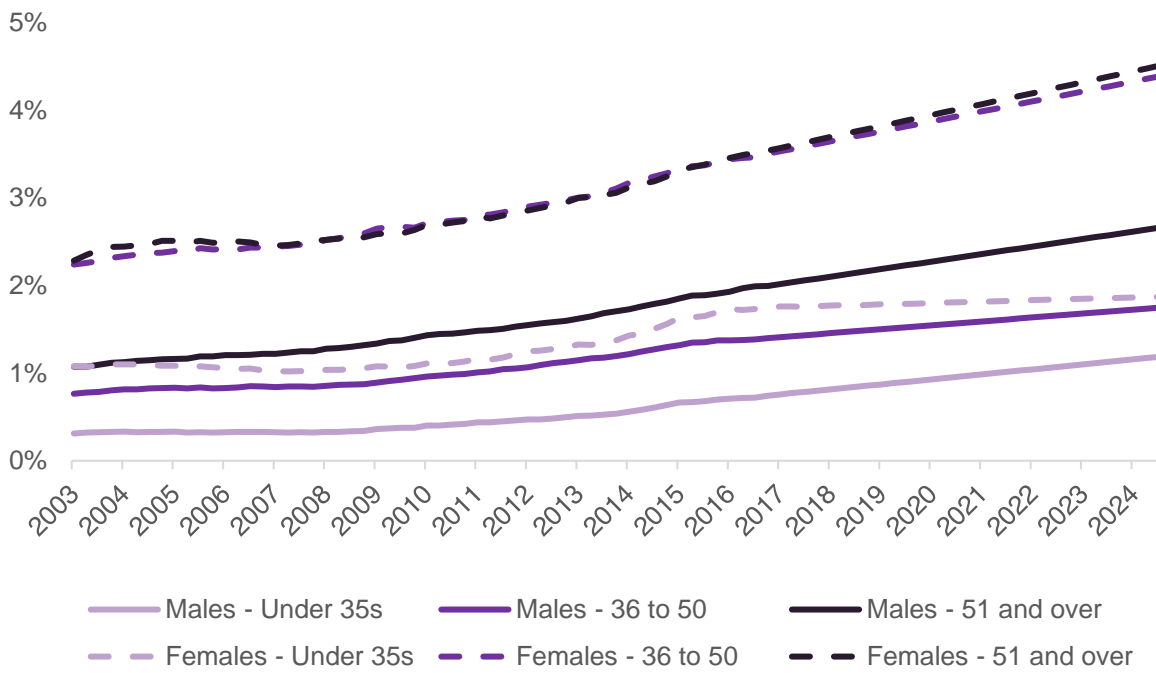
Overview

23. Carer's Allowance (CA) is paid to people who care for someone who is in receipt of a disability benefit. To be eligible for CA, both the carer and care recipient must meet qualifying criteria.
24. The Scottish Government has committed to increase the level of Carer's Allowance to that of Jobseeker's Allowance (JSA) or the amount JSA would be if it were adjusted for inflation, whichever is higher. This increase will be paid by the Scottish Government via the Carer's Allowance Supplement from September 2018 onwards.

Modelling approach

25. To forecast CA, we estimate the future number of claimants (caseload) and multiply by future payment amounts. The number of people claiming CA is linked to demographics. We see more women claiming than men and also more individuals claiming in their 40s and 50s compared to earlier ages. Above state pension age, few people receive CA as it is not possible to receive both the state pension and CA. To account for these effects, we perform our analysis split by gender and age bands.
26. We consider the likelihood of an individual to care and claim CA support. For each group we look at the number of claimants divided by their population. We call this claim rates. In recent years, claim rates have been increasing so people in each age group are more likely to claim CA than they were the previous year. This can be seen best in Figure 2 which shows the claim rates from a previous forecast.

Figure 2: Example claim rates by gender and age



Source: Illustrative Analysis by Scottish Fiscal Commission based on information from DWP's StatXplore ([link](#)), National Records of Scotland (2018) Mid-2017 population estimates Scotland ([link](#)) and ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

27. Figure 3 shows the different stages of the Carer's Allowance modelling process.

Figure 3: Carer's Allowance model overview

1) Determine the historic claim rates

- We consider the number of individuals receiving CA payments historically (caseload), downloaded from DWP's data publishing tool, StatXplore (see Box 1).
- The caseload is compared to the overall population at that time (from National Records of Scotland).
- This gives us a series of historic claim rates (number of individuals in receipt of CA in Scotland / Scottish population)

2) Forecast claim rates

- The claim rates are projected over the forecast period, which is usually five or six years ahead.
- We consider the historic claim rates and use judgement to determine what data period is considered and which statistical models are chosen (see Box 2 for information on ARIMA models).
- After the models and judgement have been applied, we have a series of forecast claim rates.

3) Allow for population projections

- We multiply the forecast claim rates by the projected Scottish population in future years (population projections are from the Office for National Statistics (ONS)).
- This estimates how many individuals we expect to be in receipt of CA in the future (caseload).
- This approach allows for expected changes in population size and demographics.

4) Calculate expenditure

- We uprate the payment rates for the start of each financial year, in line with the Consumer Price Index (CPI).
- We use either outturn CPI or forecast CPI data from the OBR.
- This approach follows the current UK Government uprating policy.
- The final step is to multiply the future caseload by the future payment amount, resulting in an expenditure forecast.

28. We make a final adjustment to reflect known differences between the DWP claimant and expenditure data. The DWP claimant data are taken as a snapshot each quarter whereas the expenditure figures cover the total cost in a financial year. When we use the claimant data to calculate annual expenditure we often get a slightly different figure to the actual spend, and we adjust for this in our projections.

29. We also use our model to provide a forecast for the Scottish Government's Carer's Allowance Supplement. The Supplement was introduced to provide the difference between Carer's Allowance and Jobseeker's Allowance, or the amount Jobseeker's Allowance would be if it were adjusted for inflation. We use the OBR's outturn and forecast CPI values to estimate the value of the Supplement in future years and multiply this by our forecast caseload.

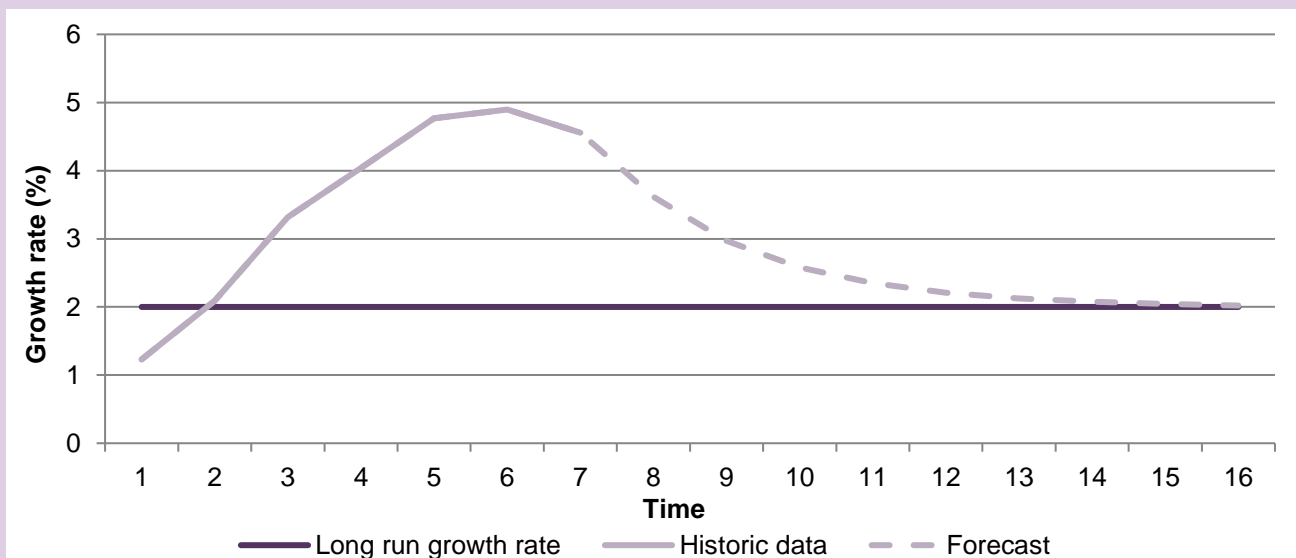
Assumptions

30. We use statistical models called ARIMA models to develop a base forecast. These models only consider the past data and project forward based on this information. The main judgement in forecasting CA expenditure is to determine if this base forecast looks reasonable and whether we need to make further adjustments. More information can be found on ARIMA models in Box 2.

Box 2: ARIMA models

An ARIMA (Auto-Regressive Integrated Moving Average) model is a standard type of statistical forecasting model and a building block to many more advanced forecasting models. ARIMA models can vary in complexity and we choose the approach which best fits the underlying data.

Figure 4: Illustrative example of ARIMA model forecast



Source: Illustrative Analysis by Scottish Fiscal Commission

The growth rate of variables, such as the number of individuals in receipt of a social security benefit, will vary over time. However they often show some persistence in the growth rate varying around a central point or trend. By looking at historic patterns in the data, an ARIMA model will project how a variable will move from its current position to return to its longer term trend as illustrated in Figure 4.

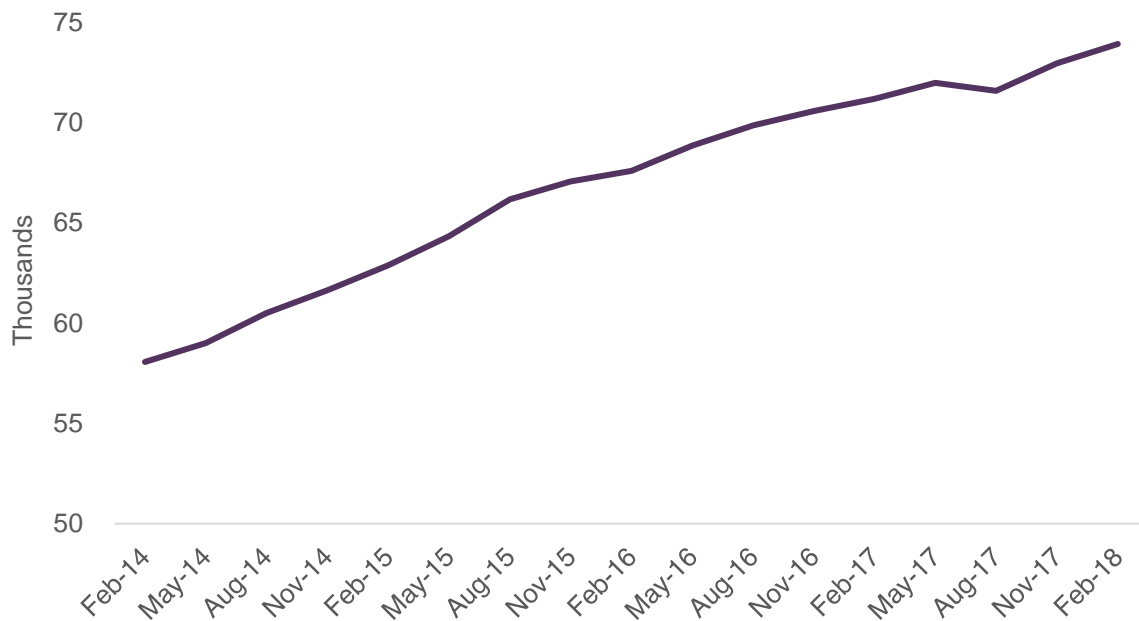
In this example, the variable has a long-run growth rate of two per cent. Recent data have shown the variable growing by around five per cent, but the growth rate is already starting to revert to trend. An ARIMA model predicts the pathway the variable will take back towards its long run trend. This simple single variable approach can be built on by including additional variables and forecasts in the model.

ARIMA models make the simplifying assumption that variables will repeat historic trends over time. In the Commission, an ARIMA model is often used as a starting point and we

may apply further judgement about the future numbers of individuals in receipt of social security benefits.

31. For example, the number of individuals in receipt of Carer's Allowance has been steadily increasing in recent years. One of the key challenges in forecasting Carer's Allowance is understanding how much this increase will continue in future years. Will the caseload continue to increase at the same pace or will it reach a limit? We are already seeing some evidence of a slower growth in numbers claiming CA as shown in Figure 5. There was faster growth in 2014 and 2015 than we have seen in the last couple of years.

Figure 5: Carer's Allowance Caseload in Scotland



Source: DWP's StatXplore ([link](#))



Discretionary Housing Payments

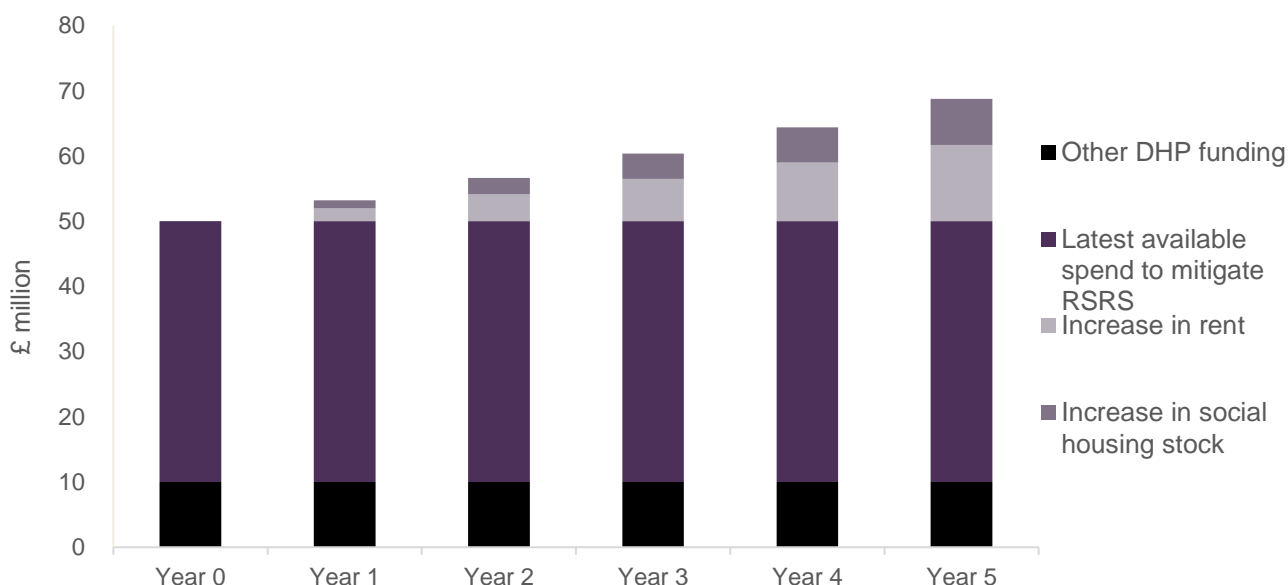
Overview

32. Discretionary Housing Payments (DHPs) are grants awarded by local authorities to people in need of financial assistance with housing costs. The Scottish Government provides funding to local authorities who pay out the grants and are responsible for managing the budget throughout the year.
33. The UK Government introduced the removal of the spare room subsidy (RSRS) also known as the 'Bedroom Tax' from April 2013. RSRS reduces the amount of Housing Benefit or housing component of Universal Credit for claimants living in social housing categorised as having one or more spare bedrooms. The Scottish Government has provided additional funding to mitigate the RSRS since 2013-14. DHPs were devolved to the Scottish Parliament in April 2017 and the Scottish Government has committed to fully mitigate the RSRS using DHPs.

Modelling approach

34. The budget for DHPs is split into two parts. The first is demand-led and dedicated to the mitigation of the RSRS. The second is a discretionary fund for all other DHP claims. As mentioned earlier in this paper, we do not model the discretionary fund for all other DHP claims and we are informed of the level of funding that will be provided to local authorities from the Scottish Government.
35. For the mitigation of RSRS, our modelling approach is based on the most recent information on what was actually spent to mitigate RSRS in Scotland. To project this forward, we allow for the two main factors that could have a significant effect on future expenditure:
 - Changes in rent levels for social housing. If social housing rents increase then the cost of having one or more spare bedrooms increases. The Scottish Government has committed to fully mitigating the RSRS and would therefore need to provide more money to local authorities to meet the increased cost.
 - Changes in the number of social housing properties available. If more social housing properties become available and these properties are under-occupied then we would see more individuals eligible to claim for support to mitigate RSRS from their local authority.
36. Figure 6 shows how our forecast starts with the latest available spend to mitigate RSRS and then we allow for future increases in social rent and housing stock. In this example both of these factors increase the forecast expenditure but they could also decrease. The spend for other DHPs remains constant.

Figure 6: Components of our DHPs forecast



Source: Illustrative analysis by Scottish Fiscal Commission

Assumptions

37. We assume that the rent for social housing in future years will increase at the same rate as the average increase in social housing rent over the last two years. If social housing rent changes by a different amount then expenditure may deviate from our forecast.
38. We assume a constant relationship between the number of social housing units and the number of households affected by RSRS. There are limited data available on the tenants who will move into the new social housing units. We do not know if new tenants will be equally likely to meet the criteria for RSRS support (under-occupying the property and in receipt of housing benefit or the housing component of Universal Credit) as current tenants. We will review this assumption when we receive further data on the number of individuals receiving support for RSRS.
39. We assume that all individuals who are entitled to support from the Scottish Government to mitigate RSRS take-up that support. We understand there may be differences across local authorities due to differences in the progress of the roll out of Universal Credit. If individuals are applying for Housing Benefit then they will be doing this through their local authority who will make them aware of the support they can provide to mitigate RSRS. However, individuals applying to DWP for Universal Credit may not be made aware of the available support and would need to make a separate application to their local authority for RSRS mitigation support.



Best Start Grant

Overview

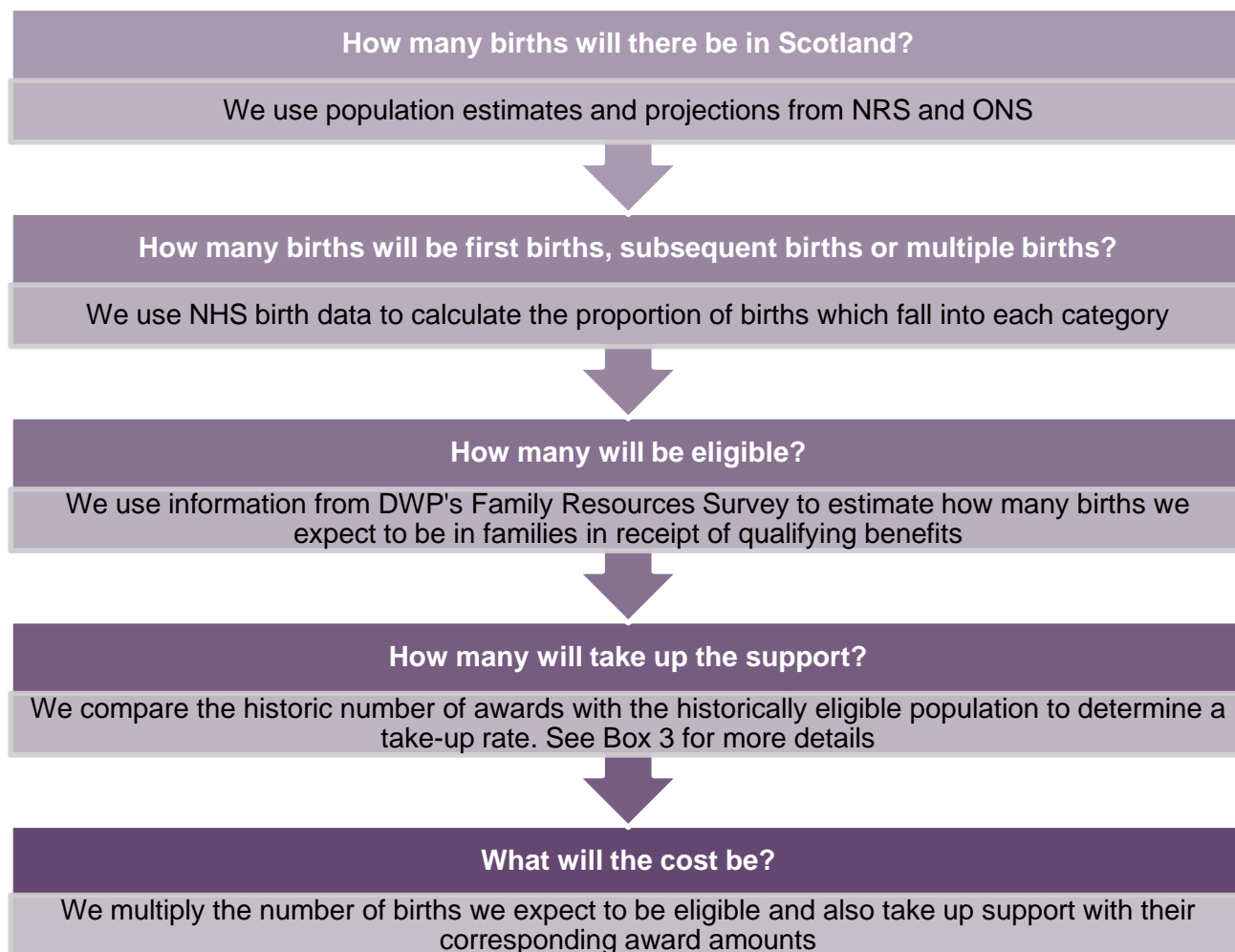
40. Best Start Grant is a series of one-off payments to help low income households with the costs associated with having a child. Support available includes a Pregnancy and Baby Grant, an Early Learning Grant and a School-Age Grant. To qualify, families must have been awarded at least one of the qualifying benefits.
41. The Scottish Government plans to fully introduce Best Start Grant before summer 2019 with the first payments of the Pregnancy and Baby Grant being made before Christmas 2018. We published expenditure forecasts for the Pregnancy and Baby Grant to accompany the secondary legislation for this grant as it was laid in the Scottish Parliament in September 2018.¹² All the grants will be administered by Social Security Scotland.

Modelling approach

42. In this section we describe our approach for modelling the Pregnancy and Baby Grant. Expenditure for the Pregnancy and Baby Grant is calculated by forecasting the expected number of recipients by award type then multiplying by their award amounts. There are different award amounts for first births, subsequent births and multiple births so we treat these all separately in our model.
43. In Figure 7 we show the series of questions that we answer using our model for Best Start Grant and the sources of data we use.

¹² Scottish Fiscal Commission (2018) Supplementary Costings – Best Start Grant (Pregnancy and Baby Grant) – September 2018 ([link](#))

Figure 7: Pregnancy and Baby Grant model overview



Assumptions

44. One of our main judgements is in respect of the proportion of births which are eligible (in receipt of qualifying benefits). We currently base our assumption on DWP's Family Resources Survey and consider any additional factors that we think may have an effect on eligibility in future years such as the roll-out of Universal Credit.
45. Another important assumption is how many individuals we think will take up the benefit. As described in Box 3 below, take-up rates are variable and the factors which may affect them are not easily quantifiable.

Box 3: Take-up rate

As well as meeting the eligibility criteria for a benefit, in many cases the individual must also apply in order to receive payment. The proportion of the eligible population who receive the benefit is referred to as the take-up rate.

The take-up rate is measured by the percentage of people who claim the benefit they are eligible for:

$$\text{Take-up rate} = \frac{\text{Number of people receiving support}}{\text{Estimated eligible population}}$$

Take-up rates are challenging to calculate as there is limited information available on the population who are eligible but not claiming. Estimation is particularly complex for benefits where eligibility depends on being in receipt of another benefit. For new benefits, the number of potential claimants is also unknown and must be estimated. Therefore, take-up rates reflect uncertainties in the size of the eligible population as well as the likelihood that eligible individuals claim.

Take-up rates vary across different benefits, these differences may be explained by:

- **Financial gain:** The larger the potential gains, the higher the take-up rate. The eligible population would be more willing to spend time and effort to apply for a benefit.
- **Awareness:** A lack of awareness about the benefit could lower the take-up rate.
- **Ease of application:** The lower the time and effort of applying, the higher the take-up rate is likely to be.
- **Social barriers:** Any stigmas associated with claiming support could reduce the take-up rate.

Model developments

46. The model for Best Start Grant is an expansion of the one we used to forecast the Sure Start Maternity Grant (SSMG) in our May 2018 publication. Some small adjustments have been made to add payments to second and subsequent children, expand the eligibility criteria and add payments to all mothers under 18.
47. The Scottish Government has announced plans to make payments to qualifying families when their children start nursery and school, also referred to as the Early Learning Grant and the School-Age Grant. These elements are not part of the current UK SSMG benefit so we will develop new functionality in the model to forecast expenditure for these.



Funeral Expense Assistance

Overview

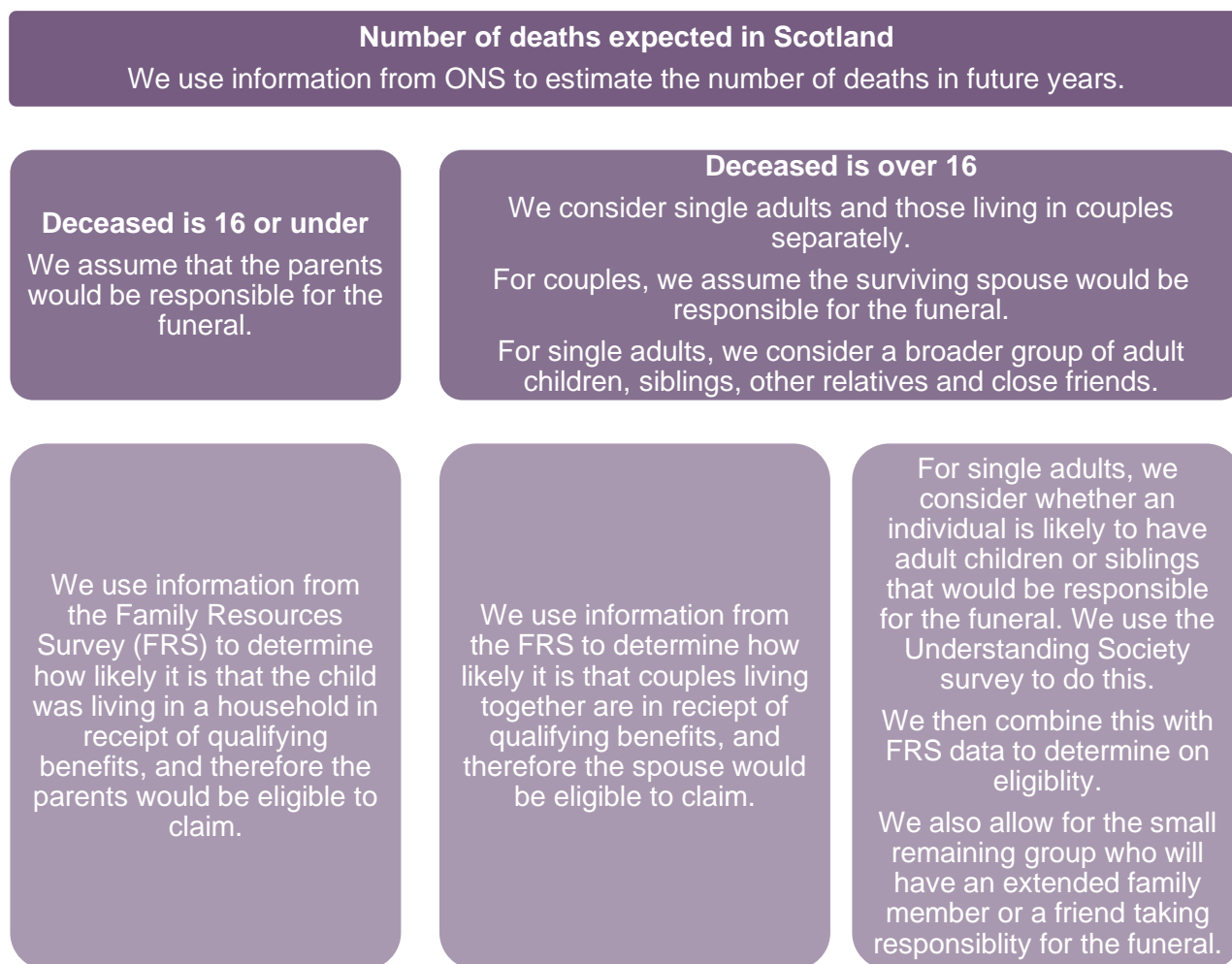
48. Funeral Expense Assistance supports individuals on low incomes with funeral costs. Claimants must have been awarded one of the qualifying benefits and they must also be responsible for the cost of the funeral.
49. The Scottish Government has announced plans to introduce Funeral Expense Assistance by summer 2019 and it will be delivered by Social Security Scotland.

Modelling approach

50. The first step in our modelling approach is to determine the number of individuals we think will be eligible for support with funeral costs. We use information from the ONS on projected numbers of deaths in Scotland, the Family Resources Survey (FRS) and the Understanding Society survey to assess how many individuals in Scotland will be responsible for a funeral and be eligible for support.¹³ This approach is shown in Figure 8.

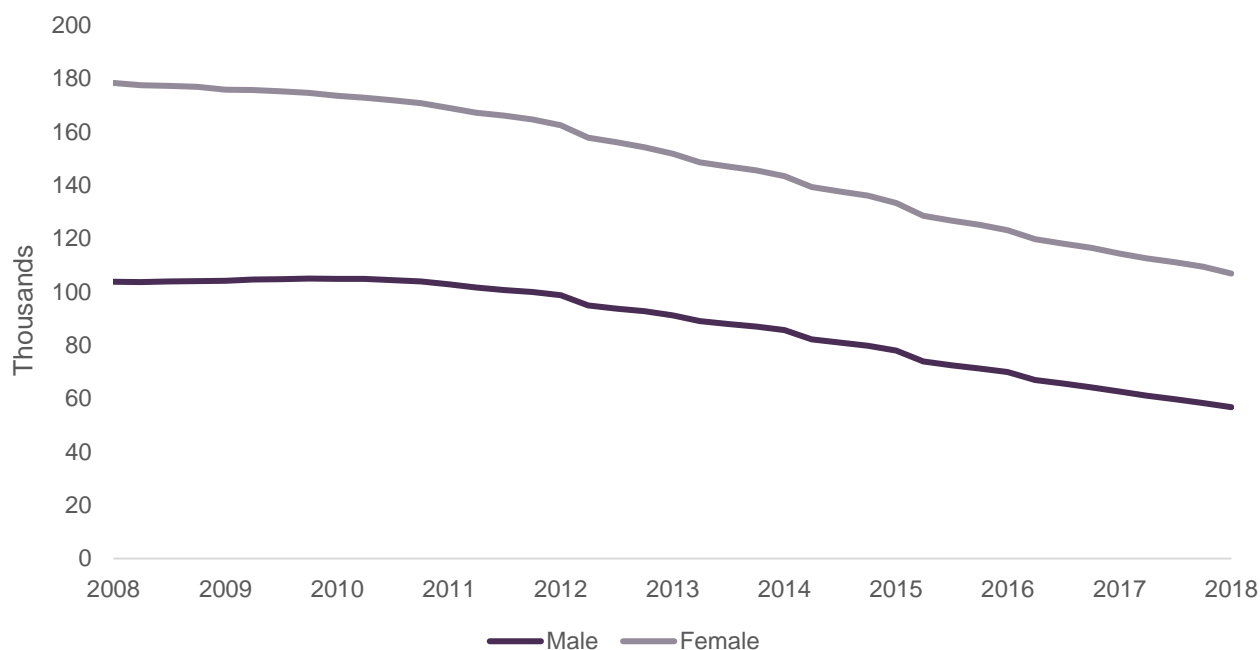
¹³ DWP Family Resources Survey ([link](#)) and the UK Data Archive Understanding Society survey ([link](#))

Figure 8: Determining eligibility for Funeral Expense Assistance



51. In recent years, we have seen decreasing numbers of individuals being eligible for support with funeral costs under the UK Funeral Payments scheme. The number of individuals in receipt of Pension Credit, which is one of the main benefits allowing a person to qualify for Funeral Expense Assistance, has been decreasing. The trend for the Pension Credit caseload is shown in Figure 9.

Figure 9: Number of individuals in receipt of Pension Credit in Scotland



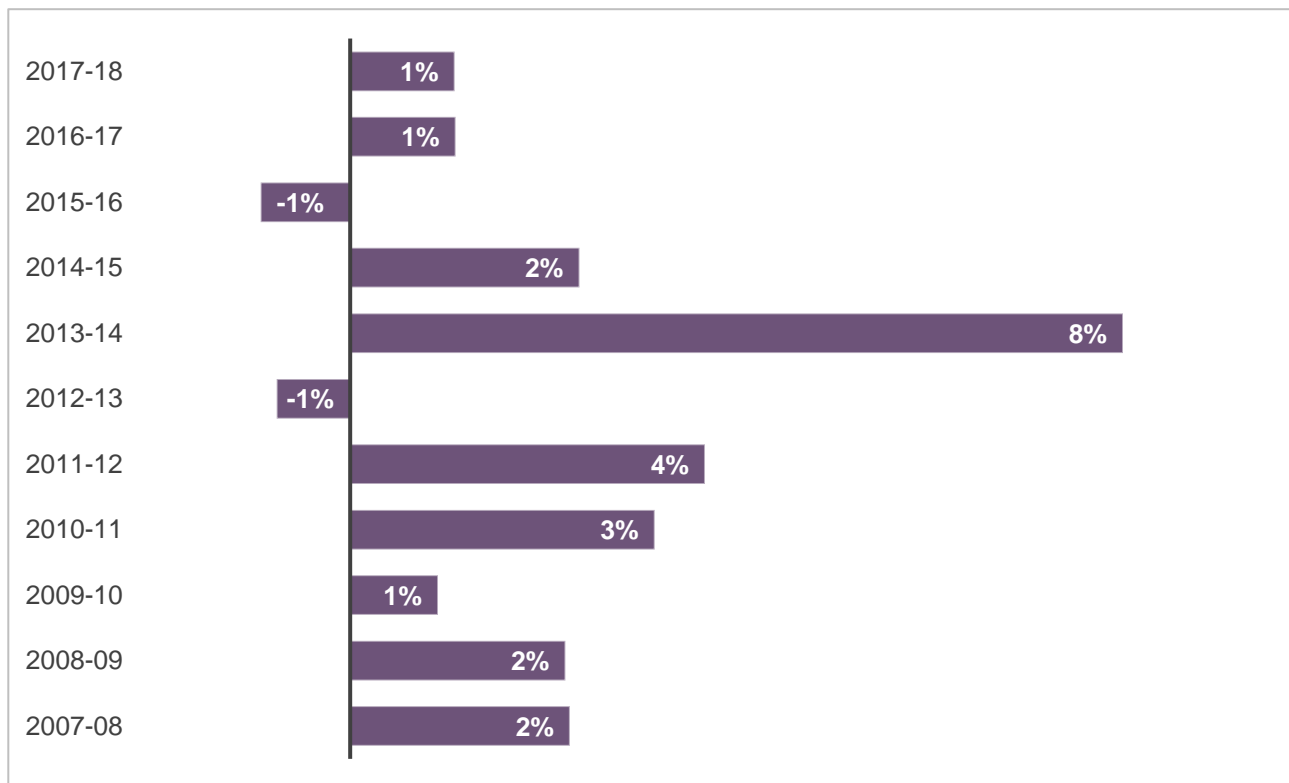
Source: DWP StatXplore ([link](#))

52. We then apply a take-up rate (see Box 3) to the eligible individuals to determine the number of individuals we think will claim and receive support. We calculate a take-up rate by comparing our estimate of the eligible number of claimants with the actual number of awards paid from DWP in previous years.
53. Finally, we multiply the number of individuals who we think will be eligible and take up support by an average award. This gives us our expenditure forecast. We have to make an assumption about how much we expect the average award amount to increase in future years.

Assumptions

54. Only part of the award is a fixed amount to cover funeral expenses. The rest of the award is to cover the burial and cremation and the amount paid is based on each individual's claim. The average award amount paid for Funeral Payments, the comparable UK benefit, in Scotland has changed year on year by between minus one per cent and plus eight per cent. This is shown in Figure 10. Given the volatility in the award amounts we take an average of the values over recent years. If the average award payment was to grow at a different rate to our estimate this would have a significant effect on our forecast of expenditure.

Figure 10: Annual percentage change in average award amounts for Funeral Payments in Scotland



Source: DWP unpublished information and DWP Social Fund figures for 2017-18 ([link](#))



Welfare Foods

Overview

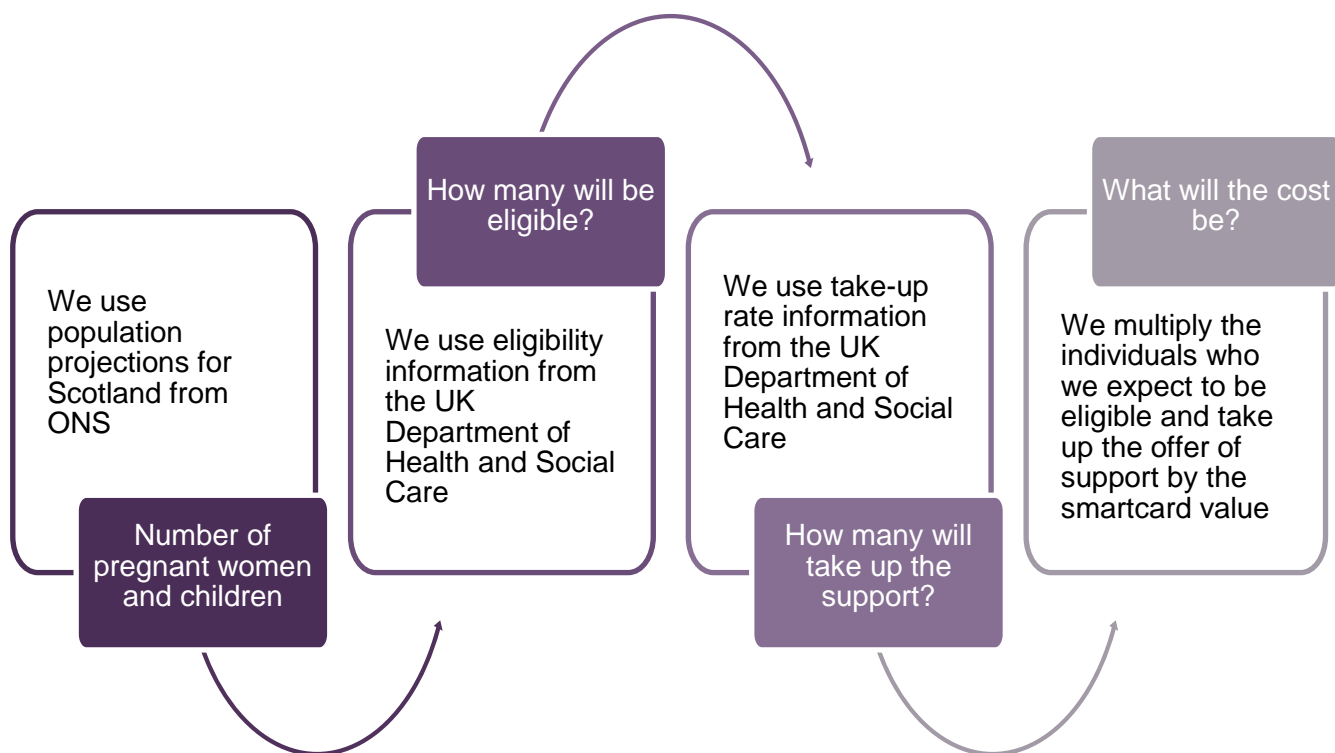
55. The Welfare Foods schemes are currently administered by the UK Government's Department of Health and Social Care and consist of two schemes: the Healthy Start Scheme and the Nursery Milk Scheme.
56. The Scottish Government proposes a phased devolution of Welfare Foods that will commence with the devolution of the Healthy Start Scheme.¹⁴ The devolution of the Nursery Milk Scheme will be at a later date and there is not yet sufficient information to be able to develop a forecasting approach and model.
57. In this section we outline our modelling approach for Best Start Foods which will replace the Healthy Start Scheme in Scotland. Best Start Foods will commence in summer 2019 and will be delivered by Social Security Scotland. We will forecast expenditure on the existing Healthy Start Scheme until firm plans and dates for Best Start Foods are announced.
58. Best Start Foods will provide a smartcard to purchase healthy foods for all pregnant teenagers under the age of 18 plus pregnant women and families with children under the age of three who are in receipt of a qualifying benefit.

Modelling approach

59. Expenditure for Best Start Foods is calculated by forecasting the expected number of recipients and multiplying by the smartcard value. The smartcard value is weekly so we adjust to create a yearly figure.
60. The expected number of recipients of Best Start Foods is determined by forecasting the number of pregnant women and children under three, assessing who is eligible for support as you have to be a certain age or in receipt of a qualifying benefit and then applying a take-up rate (see Box 3 on take-up rates). This process is shown in Figure 11.

¹⁴ Scottish Government (2018) Welfare Foods – a consultation on meeting the needs of children and families in Scotland ([link](#))

Figure 11: Our forecast model for Best Start Foods



Assumptions

61. We assume how many pregnant women and children will be eligible for support based on historic information we are provided from the UK Department of Health and Social Care. We then apply judgement about how we expect this to change in the future. For example, we expect household incomes to increase over future years and therefore some individuals may no longer be eligible for support as there is a maximum income level that is fixed by the UK Government.
62. Similarly to Best Start Grant we need to consider take-up rates and the same factors described in Box 3 also affect Best Start Foods.



Employability

Overview

63. Fair Start Scotland (FSS) is a voluntary employability service designed to help people with disabilities or who are long-term unemployed find sustained employment. The service was launched on 3 April 2018. The Scottish Government has contracted external employability service providers to deliver the service. Eligible individuals are referred mainly by Jobcentre Plus to an employability service provider.
64. The service is designed around participant's needs and there are three broad categories of service provided: Core, Advanced and Intense. This segmentation reflects the range of circumstances of the people who opt-in. For most participants, pre-employment support is provided for up to 12 months followed by a further period of support in employment should the participant agree.
65. There were two transitional services (Work Able Scotland and Work First Scotland) which accepted referrals during 2017-18.
66. The FSS service has been allocated a £96 million budget by the Scottish Government to accept referrals over three years, but contracts with and payments to providers run for five years, from April 2018 to November 2023 with final outcome payments made up to 29 February 2024.

Modelling approach

67. Total expenditure on FSS is comprised of spend on service fees and spend on performance related fees. Service fees are paid to providers over the first three years of the contracts – these are not based on performance. The performance related fees are paid to providers based on the number of job outcomes and the length of time people are employed.
68. As part of the tendering process, service providers were asked to give their forecasts for the numbers of people they expected to help into sustained employment in each support category. They also gave information about the costs of supporting people in each group through the full service to the 12 month employment outcome and how many people in each group would sustain employment for the 13, 26 and 52 weeks. The average maximum fees per person vary by service group.
69. The employability expenditure forecasts presented in our December 2017 and May 2018 forecast reports were based on data provided by Scottish Government analysts on the contracts in place. These data included assumptions about how

many people in each category will be referred to the service, voluntarily receive support, obtain a job and achieve sustained employment.

Assumptions

70. Expenditure on the service depends on the numbers of job outcomes, and the support category of individuals with successful job outcomes. To forecast this we estimate the eligible population, and then apply an assumption about how many of those in each category will be referred and then start the programme. These assumptions about take-up have been based on previous DWP schemes.
71. Assumptions are then applied to estimate the number who are expected to start a job and the number who are then expected to go on to achieve sustained employment outcomes. Performance related fees are only paid once a participant has reached the sustained job outcome stage.

Model developments

72. Our forecasts to date have relied on information from the Scottish Government and service providers on how many service starts and sustained employment outcomes they expected to achieve. Our December forecast was based on projected achievements across the full life of the service and our May forecast was updated as providers set out when they expected milestones to be achieved.
73. The forecasts published by the Commission to date reflect the contracts set by the Scottish Government and agreed with service providers. Since the service was only launched in April 2018 there are limitations to the performance information currently available. In developing our future forecasts we will work with the Scottish Government to make best use of data on the number of referrals, programme starts, job starts and sustained outcomes as they become available each month. By monitoring these figures and comparing performance against expectation, the Commission will be able to inform assumptions and enhance our ownership of future forecasts.
74. Our employability forecasts will always be reliant, to an extent, on information from the Scottish Government on how they expect expenditure on the services to develop. The service is delivered by providers and monitored by the Scottish Government. As the Scottish Government has routes to influence the performance of providers, and therefore the level of expenditure. This has a more direct effect on expenditure than we see for other social security benefits, where, for example, the Government may or may not be successful with a strategy to increase take-up of benefits.



III Health and Disability benefits

75. In Table 1 we provided an overview of each of the ill health and disability benefits that will be devolved as a result of the Scotland Act 2016. In Table 4 we provide information and commentary on the caseload for each of the benefits over the past five years.

Table 4: Ill health and disability benefit caseloads

Benefit	Caseload in Scotland in the past five years (thousands)												
Attendance Allowance (AA)	<table border="1"> <caption>Attendance Allowance (AA) Caseload (thousands)</caption> <thead> <tr> <th>Year</th> <th>Caseload (thousands)</th> </tr> </thead> <tbody> <tr><td>2010</td><td>134</td></tr> <tr><td>2011</td><td>132</td></tr> <tr><td>2012</td><td>130</td></tr> <tr><td>2013</td><td>128</td></tr> <tr><td>2014</td><td>126</td></tr> </tbody> </table>	Year	Caseload (thousands)	2010	134	2011	132	2012	130	2013	128	2014	126
Year	Caseload (thousands)												
2010	134												
2011	132												
2012	130												
2013	128												
2014	126												
Disability Living Allowance (DLA)	<table border="1"> <caption>Disability Living Allowance (DLA) Caseload (thousands)</caption> <thead> <tr> <th>Year</th> <th>Caseload (thousands)</th> </tr> </thead> <tbody> <tr><td>2010</td><td>350</td></tr> <tr><td>2011</td><td>345</td></tr> <tr><td>2012</td><td>340</td></tr> <tr><td>2013</td><td>330</td></tr> <tr><td>2014</td><td>209</td></tr> </tbody> </table>	Year	Caseload (thousands)	2010	350	2011	345	2012	340	2013	330	2014	209
Year	Caseload (thousands)												
2010	350												
2011	345												
2012	340												
2013	330												
2014	209												

The caseload for AA has remained relatively stable over the period, with only a slight decrease.

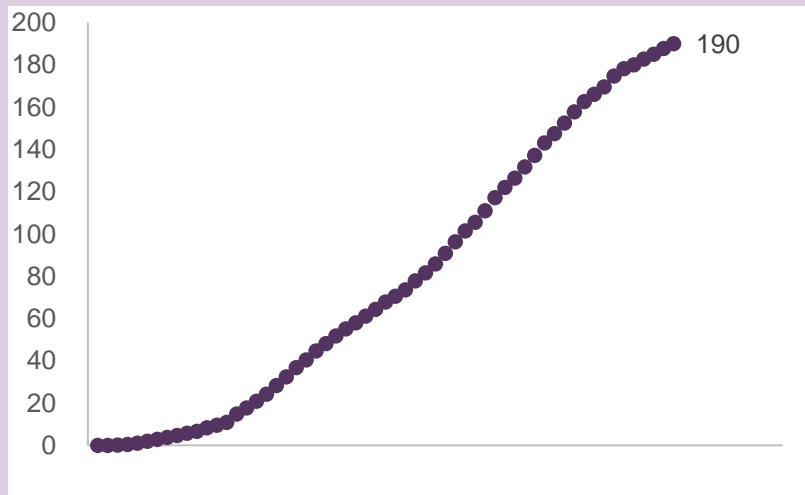
The caseload for DLA has been falling as a result of the introduction of Personal Independence Payment. Individuals can no longer apply for DLA if they are aged 16 or over.

Industrial Injuries
Disablement Benefit
(IIDB)



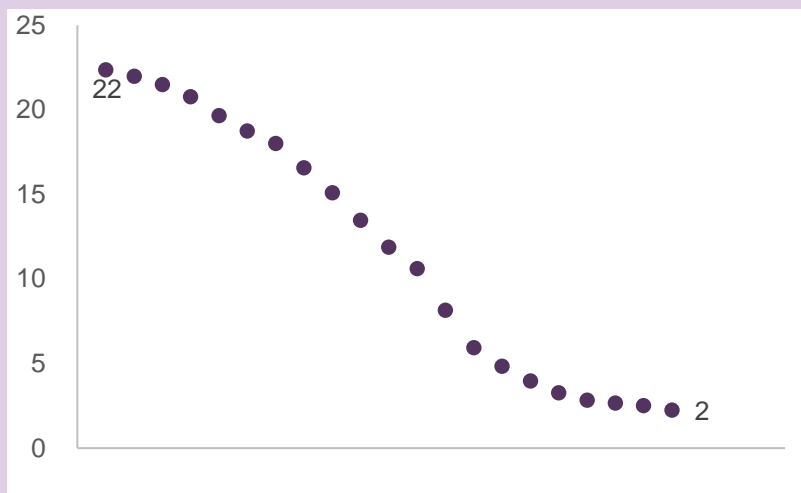
The caseload for IIDB has been slowly decreasing over the past five years. This is driven by a reduction in the number of new claims for IIDB over this period.

Personal Independence
Payment (PIP)



PIP was introduced in Scotland in April 2013. The caseload for PIP in Scotland has increased steadily because of new claims and working age adults who were previously in receipt of DLA and have been migrated to PIP.

Severe Disablement Allowance (SDA)



The caseload for SDA has fallen significantly over the past five years as it is closed to new claimants, and has been since 2001 when it was replaced by Incapacity Benefit.

Source: DWP StatXplore ([link](#)), NOMIS benefit payments ([link](#)), Industrial Injuries Disablement Benefit: quarterly statistics ([link](#))

76. All of the ill health and disability benefits being devolved have different challenges when it comes to forecasting. The historic caseload for each of the benefits is very different and will be driven by different factors. Some examples are provided below:
- The increasing caseload for PIP and the decreasing caseload for DLA are largely driven by the migration from DLA to PIP. There is a short-term impact that will continue until the migration completes. There will also be longer term impacts for forecasting as the individuals that will be in receipt of PIP will not necessarily be the same as those historically seen for DLA, meaning that historic DLA data may no longer be relevant. An example of this is that we are starting to see more incidences of individuals receiving the highest level of care and mobility awards under PIP than we had observed previously with DLA.
 - For AA, individuals can only apply when they are aged 65 (male state pension age) and over. This provides challenges for forecasting as the population aged 65 and over in Scotland is set to increase and therefore if all other factors remained constant we would expect an increase in forecast expenditure. There are also other Scottish Government policies such as free personal care for everyone aged 65 and over that may have an effect on the number of individuals who claim AA.
 - SDA is not open to new applicants and has a steadily decreasing number of claimants. We would want to take a proportionate approach and develop a modelling approach that is relatively simple.
77. It is clear that a 'one size fits all' approach will not be appropriate for the ill health and disability benefits. We do not currently have forecast models for these benefits and one of the first steps in our analysis will be to determine what has driven the historic caseload figures shown above and what factors will be important in the future.

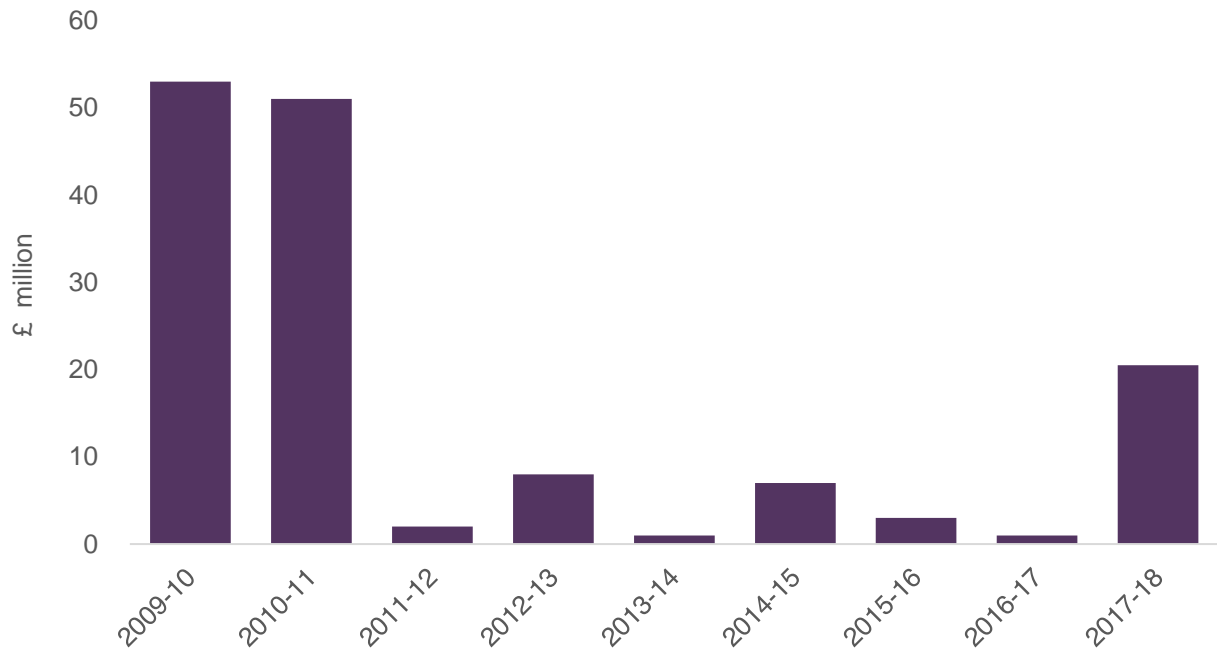


Cold Weather Payments and Winter Fuel Payments

Cold Weather Payments

78. Cold Weather Payments are financial support, paid to individuals who meet the qualifying criteria, during periods of very cold weather. Qualifying individuals are paid £25 for each consecutive seven day period where the weather is recorded as, or forecast to be zero degrees Celsius or below over the winter period.
79. Spending on Cold Weather Payments follow trends in the weather, Figure 12 below shows the volatility of payment amounts over the past nine years. As expected, the cold winters in 2009-10, 2010-11 and 2017-18 resulted in higher payment amounts.

Figure 12: Expenditure on Cold Weather Payments in Scotland



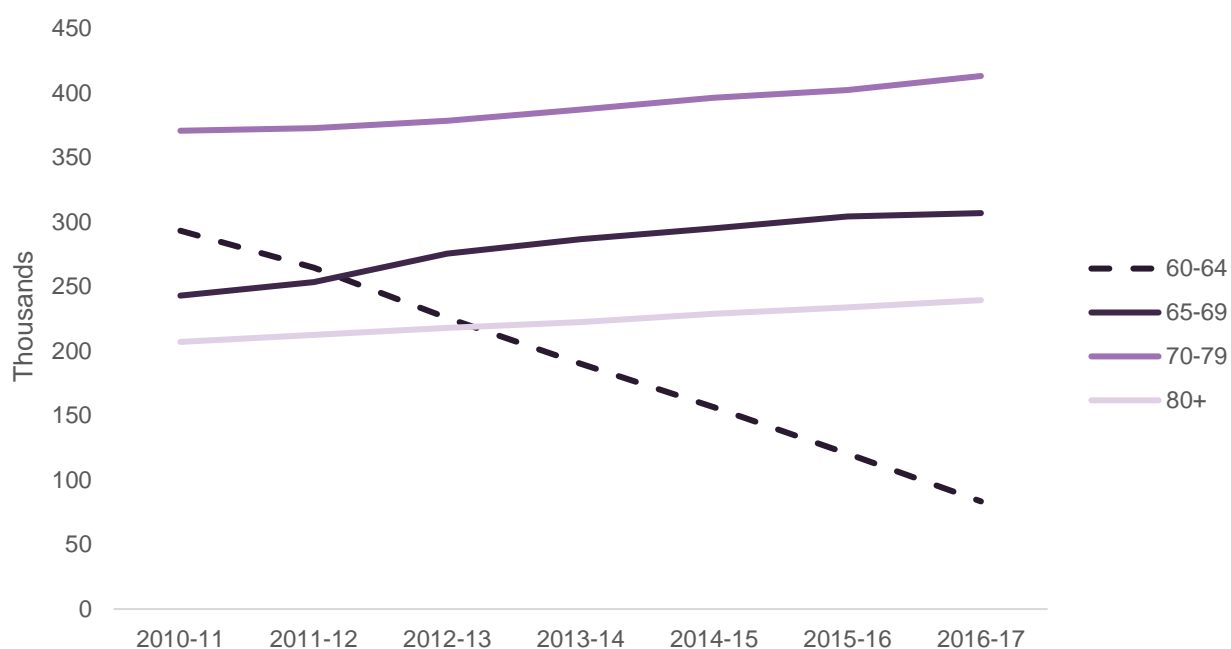
Source: DWP benefit expenditure by country and region, 1996/97 to 2016/17 ([link](#)) and DWP Social Fund figures for 2017-18 ([link](#))

80. We have not developed a model for Cold Weather Payments in Scotland at the time of this publication. Our modelling approach will be based on taking average values of the expenditure in recent years shown in Figure 12, acknowledging there will be significant volatility around this long-term average depending on the weather in a given year.

Winter Fuel Payments

81. Winter Fuel Payments are annual lump sums, awarded to people who are at the qualifying age for Pension Credit (which is usually linked to state pension age), or older on a qualifying date. Subject to certain qualifying criteria, individuals can receive between £100 and £300 to help them pay their heating bills.
82. The caseload for Winter Fuel Payments is shown in Figure 13 below. The qualifying age has been increased in line with the changes to the female state pension age and as a result the number of individuals aged 60-64 receiving payments has decreased. As the state pension age continues to increase, as announced by the UK Government, we will see the caseload for 65-69 year olds also begin to decrease.

Figure 13: Caseload for Winter Fuel Payments by age in Scotland



Source: DWP Winter Fuel Payment statistics: Recipient and household figures ([link](#))

83. We do not currently have a model to produce forecasts for Winter Fuel Payments in Scotland. We expect that our approach to modelling Winter Fuel Payments will be heavily linked to demographics of the Scottish population as the main criterion for receiving payments is that an individual is a certain age.
84. Scotland's population is projected to age. In the year to mid-2017, just under one in five people (19 per cent) were aged 65 and over. However by 2041, one in four people (25 per cent) are projected to be in this age group.¹⁵ Therefore we expect an increase in expenditure for Winter Fuel Payments, assuming all other factors and the Scottish Government's policy remains unchanged.

¹⁵ National Records of Scotland (2018) Scotland's Population 2017 Infographic report ([link](#))

Abbreviations

AA	Attendance Allowance
ARIMA	Autoregressive Integrated Moving Average
BSF	Best Start Foods
BSG	Best Start Grant
CA	Carer's Allowance
CAS	Carer's Allowance Supplement
CWP	Cold Weather Payment
DHP	Discretionary Housing Payments
DLA	Disability Living Allowance
DWP	Department for Work and Pensions
FEA	Funeral Expense Assistance
FSS	Fair Start Scotland
HSV	Healthy Start Vouchers
IIDB	Industrial Injuries Disablement Benefit
JSA	Jobseeker's Allowance
NHS	National Health Service
NRS	National Records of Scotland
OBR	Office for Budget Responsibility
ONS	Office for National Statistics
PIP	Personal Independence Payment
RSRS	Removal of the Spare Room Subsidy
SDA	Severe Disablement Allowance
SFC	Scottish Fiscal Commission
SSMG	Sure Start Maternity Grant
SSS	Social Security Scotland

SWF	Scottish Welfare Fund
UC	Universal Credit
WFP	Winter Fuel Payment

A full glossary of terms is available on our website.¹⁶

¹⁶ Scottish Fiscal Commission Glossary of Terms ([link](#))

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