Scottish Fiscal Commission

Fiscal Sustainability Report

March 2023

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Any enquiries regarding this publication should be sent to us at: Scottish Fiscal Commission, Governor's House, Regent Road, Edinburgh EH1 3DE or info@fiscalcommission.scot

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Foreword

The Scottish Fiscal Commission is the independent fiscal institution for Scotland. Our statutory duty is to provide independent and official forecasts of the economy, tax revenues and social security spending to inform the Scottish Budget.

The publication of a fiscal sustainability report was recommended by the OECD in its evaluation of the Commission and by the Parliament's Finance and Public Administration Committee. It is our intention to publish full sustainability reports at least once in each five-year Parliamentary session. In other years we intend to publish papers looking at the fiscal sustainability in more specific areas, such as climate change, health and child poverty.

In 2022, the Commission published a consultation paper on our plans. We also published an analysis of long-term demographic projections and their impact on Scottish economic growth.[1]

This report is our first assessment of Scottish Government's fiscal sustainability. We produce 50 -year projections of Scottish Government spending and funding and set out how these affect the sustainability of current Scottish Government spending over the long-term. We show how demographic changes will affect the Scottish Government's fiscal sustainability and highlight key risks to Scottish Government funding.

We do not cover all potential areas that will affect the Scottish Government's fiscal sustainability in this report. We welcome feedback on the approaches used in this report, and suggestions for future topics.

We thank officials at the Office for Budget Responsibility, HM Treasury, Northern Ireland Fiscal Council and Scottish Government for their help with our work on this report.

Professor Graeme Roy

Professor Francis Breedon

Dr Domenico Lombardi

Professor David Ulph

22 March 2023

[1] Scottish Fiscal Commission (2022) Approach to Fiscal Sustainability Consultation Paper (link) and Scottish Fiscal Commission (2022) Trends in Scotland's population and effects on the economy and income tax (link).

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Summary

Introduction

1 This is our first report on the long-term fiscal sustainability of the Scottish Government's budget. We have projected spending and funding up to 2072-73. These projections allow us to assess the long-term sustainability of the Scottish Government's finances. This assessment addresses factors arising from Scotland's devolved administration operating within the fiscal framework agreed with the UK Government.

2 In this report we have chosen to focus on the effect that Scotland's changing population will have on fiscal sustainability. We project Scotland's population and economic growth to develop our projections for spending and funding under current policies. In doing so we assume the constitutional arrangements, including the fiscal framework, do not change. This allows us to evaluate how fiscally sustainable current policies are in light of a changing population.[2]

3 This approach is broadly consistent with similar reports produced by the Office for Budget Responsibility (OBR) for the UK and by fiscal institutions in other countries.[3] However, in these reports for other countries the annual budget gap between spending and funding leads to an adjustment to the level of public debt, with judgements then made on the sustainability of both the public sector debt path and the annual fiscal gap. Under the fiscal framework the Scottish Government is required to have a broadly balanced budget and cannot accumulate debt to manage fiscal pressures. Therefore, when assessing sustainability, we focus solely on the projected annual gap between spending and funding.

4 Many of the fiscal sustainability challenges that Scotland faces are common across the UK. The fiscal framework also means that the sustainability of the Scottish Government's spending and tax policies are interlinked with that of the UK Government. If the UK Government makes changes to its spending taxation now or in the future to address fiscal sustainability at the UK level (of which the outlook for Scotland is a contributing factor), then there are likely to be direct implications for Scottish Government funding and the sustainability of the Scottish Government's finances. This would occur as a result of UK Government spending and taxation changes affecting the level of funding the Scottish Government receives through the Block Grant.

5 Taking these factors into account, our assessment suggests that the Scottish Government will face significant challenges in funding the future provision of devolved public services in Scotland.

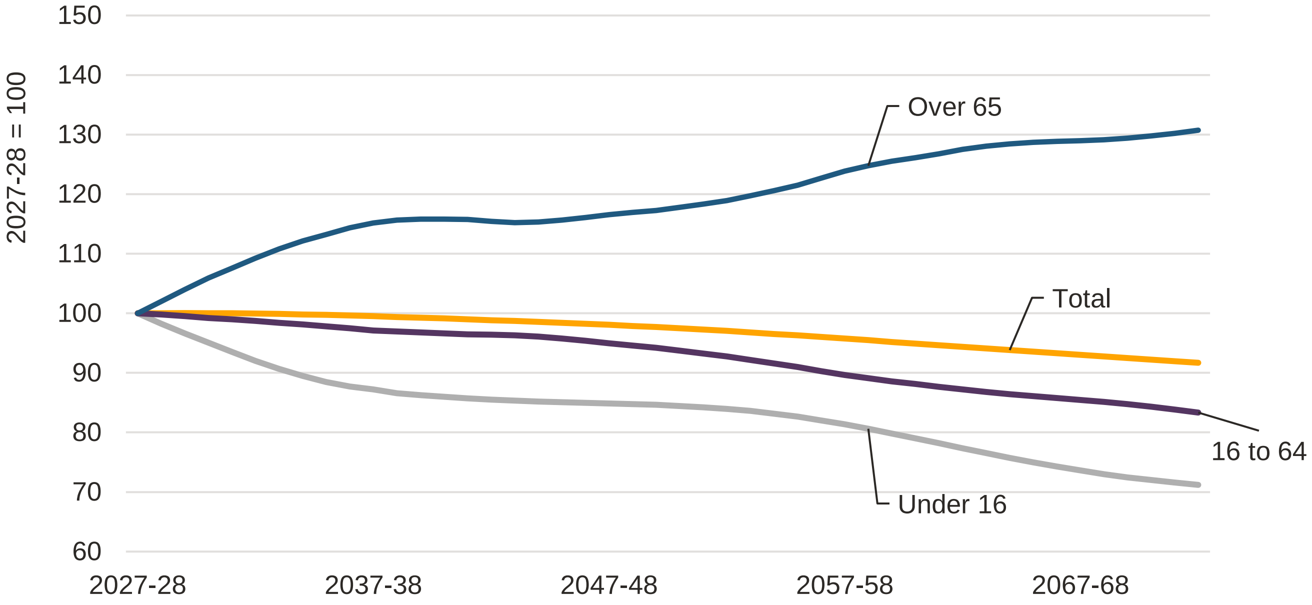
Demographics and economy

6 Our projections for Scotland's population follow those produced by the National Records of Scotland (NRS). In our central projection the population of Scotland falls by approximately 400,000 over the next 50 years, driven by the low birth rate. Recent birth rates in Scotland have been low in historical terms and are assumed to remain at this level for the next 50 years.

[2] Further information on the methodology is presented in **Chapter 1** with full details in **Annex A**.
[3] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).

7 As a result of low birth rates, the population is also ageing. The proportion of the population aged 65 and over increases from 22 per cent in 2027-28 to 31 per cent in 2072-73, while the population aged 16 to 64 and under-16 are falling in size, as Figure 1 shows. These changes in the age structure have implications for the demand for public services: with more demand for services used more by older people, such as health, and less demand for those used more by younger people, such as education.

Figure 1: Scottish population indices, 2027-28 to 2072-73



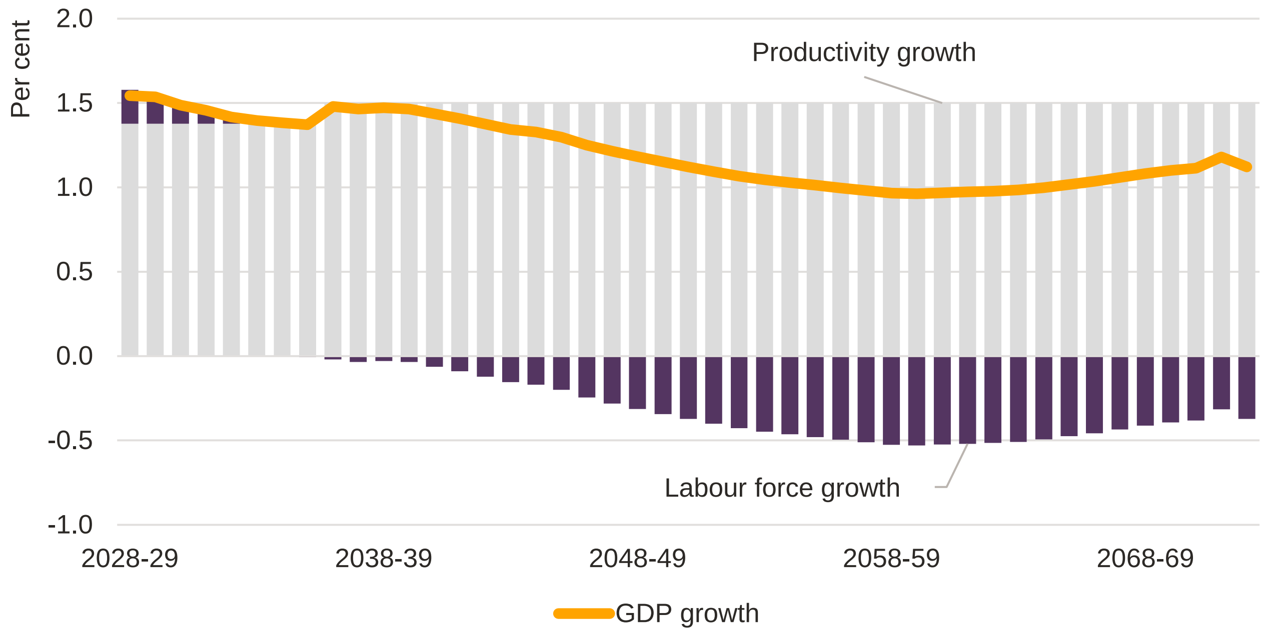
Source: Scottish Fiscal Commission

8 Our long-term economic projections are determined by the supply of labour and productivity. We have aligned our productivity assumptions with the OBR and assume productivity will grow by 1.4 per cent a year until 2035-36, and by 1.5 per cent a year thereafter.

9 The number of people in work is given by the size of the total population, the proportion of those who are economically active, and the unemployment rate. Younger age groups typically have lower participation rates as they are more likely to be in education. Older people also have lower participation rates as they are more likely to be retired. We expect Scotland's ageing population to lead to a decline in the overall participation rate.

10 We project Scottish gross domestic product (GDP) to grow on average by 1.2 per cent a year between 2027-28 and 2072-73. Given the lack of growth in the labour supply, the main driver of long-term economic growth is productivity, as shown in Figure 2. From the 2030s onwards a falling labour supply has a negative impact on GDP growth.

Figure 2: Components of projected Scottish GDP growth, 2028-29 to 2072-73



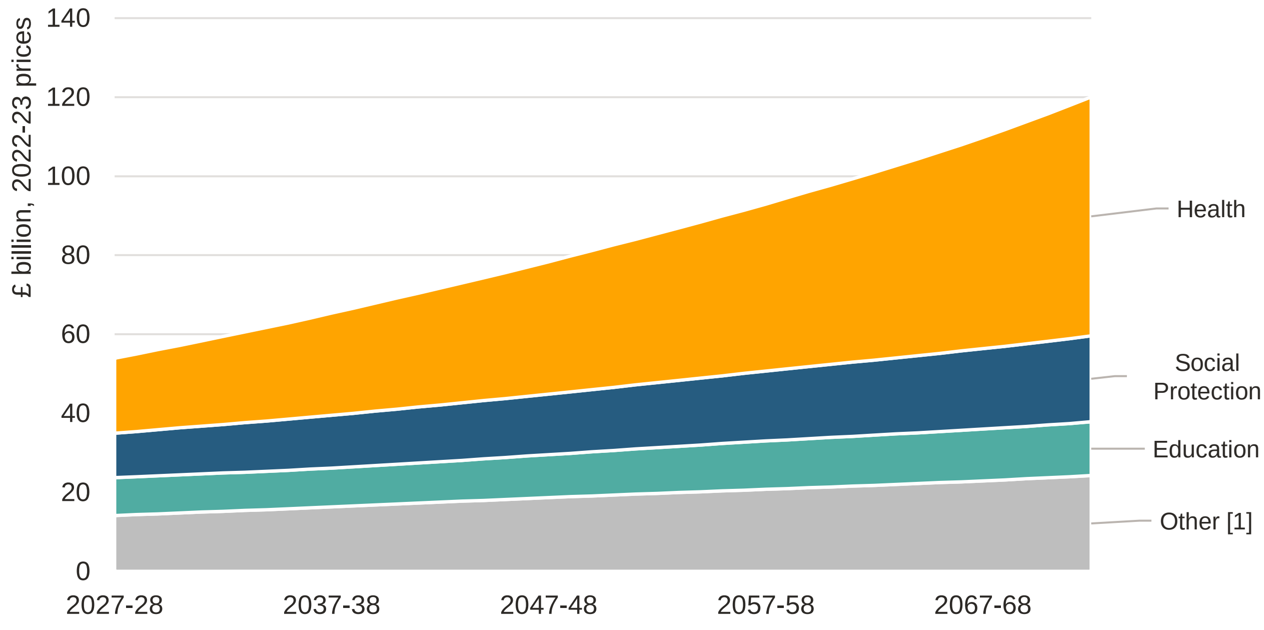
Source: Scottish Fiscal Commission

Spending projections

11 Total spending on devolved public services is estimated to be £54 billion in 2027-28. By the end of our projection period in 2072-73, we project that this spending increases by 123 per cent to £120 billion in today's prices.

12 Health is the largest component of Scottish Government spending and it grows more quickly than other areas. Health spending increases from 35 per cent of devolved spending in 2027-28 to 50 per cent in 2072-73.

Figure 3: Spending on devolved public services



Source: Scottish Fiscal Commission

[1] 'Other' includes devolved areas of spending such as transport, public order and safety, and recreation and culture.

13 Our projection takes into account additional pressures that have been identified in health provision which are not explained by demographic change. They have been attributed to the additional costs associated with new treatments and the increasing prevalence of long-term health conditions. Demographic changes do have an impact on projected health spending. Over the first 25 years, as spending per person is higher for older people, the ageing population leads to upward pressure on health spending. However, in the second half of the projection the fall in the overall size of the population offsets this effect.

14 The falling number of younger people leads to education spending falling as a share of overall spending from 18 per cent of all devolved public spending in 2027-28 to 11 per cent in 2072-73.

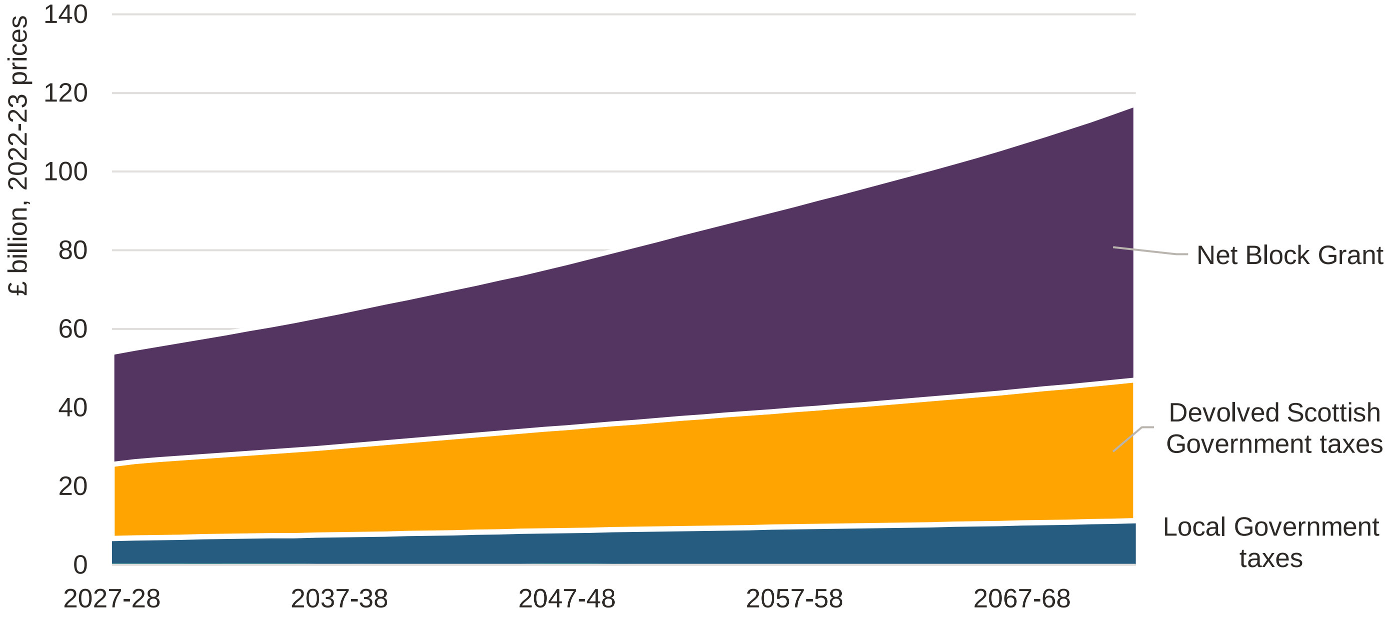
15 Taking spending as a whole, the scale of the projected increase in spending means that over the next 50 years the continued delivery of devolved public services in line with current levels will be challenging for the Scottish Government.

Funding projections

16 The Scottish Government's funding is largely made up of revenue from income tax and other devolved taxes revenues plus funding from the UK Government through the Block Grant.

17 Each year the Block Grant is updated to reflect changes in UK Government spending plans, with adjustments then applied to factor in the devolution of specific taxes and benefits. These funding arrangements are governed by the fiscal framework agreed between the Scottish and UK governments. As Figure 4 shows total funding is projected to grow in real terms from £54 billion in 2027-28 to £117 billion in 2072-73.

Figure 4: Projected Scottish Government funding



Source: Scottish Fiscal Commission

18 Changes to the UK Government's spending on services such as health or education in England are reflected in the Block Grant. Despite the devolution of some tax powers to the Scottish Government, the Block Grant remains the largest component of funding for the Scottish Government throughout our projections. It is notable that the largest factor in the growth of the Block Grant over the next 50 years is the increase in the projected UK Government spending on health in England.

19 The Scottish Government receives additional funding for devolved social security benefits in the form of Block Grant Adjustments (BGAs). These are included in the net Block Grant in Figure 4. BGAs are based on UK Government spending on the equivalent benefits in England and Wales. Since the devolution of social security, the Scottish Government has made policy and operational changes (such as the introduction of the Scottish Child Payment) which result in social security expenditure exceeding the BGAs by more than £1 billion by 2027-28. This additional expenditure persists throughout our projections.

20 Turning to tax, income tax revenue grows by 91 per cent in real terms between 2027-28 and 2072-73. This factors in our demographic projections and growth in average real incomes. We assume that other taxes grow in line with Scottish GDP.

21 Offset against tax revenues are the tax BGAs. Our projections show the income tax net position for the Scottish Government, tax revenues minus the BGA, will be positive over the next 50 years. BGAs are calculated using the Indexed per Capita (IPC) method, which is partly determined by relative growth in the Scottish population compared to England and Northern Ireland. The projected decline in the Scottish population will slow the growth in the income tax BGA. Although total tax revenues in England and Northern Ireland grow faster than revenue in Scotland, the population effect on the BGA means the net position remains positive.

Fiscal Sustainability

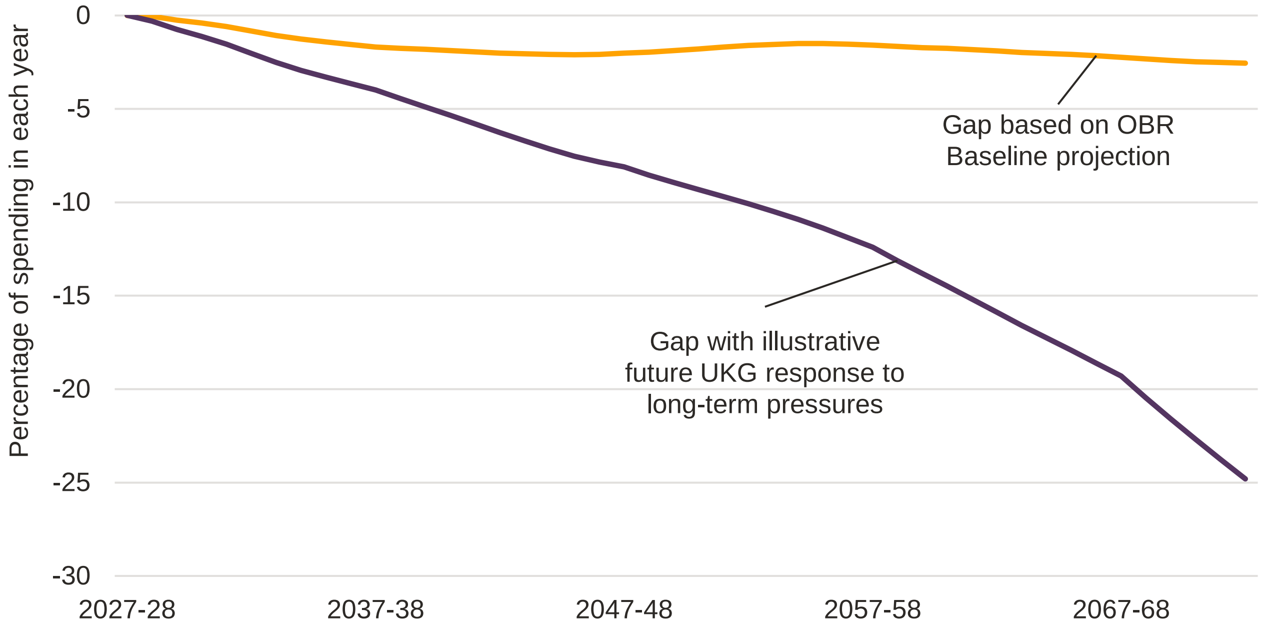
22 The fiscal framework agreement between the Scottish and UK governments sets out the mechanisms for fiscal transfers between the two governments. It means that fiscal sustainability in Scotland is a shared endeavour between the Scottish and UK governments.

23 In their Fiscal risks and sustainability report for the UK, the OBR provides a central scenario in which they project UK spending and revenue over the next 50 years.[4] Our funding projections are based on this OBR central scenario. Combining our projections for funding and spending, if public services in Scotland are to continue to be delivered as they are today, Scottish Government spending over the next 50 years will exceed the estimated funding available by an average of 1.7 per cent each year.

24 However, in their central scenario for the UK the OBR conclude that, combined with their projections for tax revenue, their projections for UK Government spending are not sustainable. The UK Government would need to consider addressing this through either raising more revenue or through reducing spending to stop public debt taking an unsustainable path. Based on the OBR's suggested paths for reducing the projected UK Government deficit, we have modelled a scenario where the fiscal tightening is applied evenly across all areas of UK Government spending and taxation. This would lead to a reduction in funding for the Scottish Government budget through a reduction in the Block Grant and higher BGAs for tax. The end result is a considerably higher fiscal gap in the Scottish Government budget, with an average over the next 50 years of 10.1 per cent of total spending each year.

[4] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link)

Figure 5: Annual Budget Gap and UK Government response to OBR baseline projection



Source: Scottish Fiscal Commission

25 This report is intended to provide an indication of the broad scale of the potential adjustments the Scottish Government would have to make in order to achieve fiscal sustainability. We think that, given the magnitude of the fiscal gap and the findings resulting from our analysis, this report needs to be considered across the public sector in Scotland when planning the future delivery and funding of public services, and in making decisions now to help prepare for the future.

Chapter 1 Introduction

What is in this report?

1.1 This report presents our conclusions on the fiscal sustainability of devolved spending and funding in Scotland over the next 50 years. For this report we have focussed on the effect of population change and the implications of the devolution arrangements for the Scottish Government's budget.

1.2 In this chapter we describe what is meant by fiscal sustainability and present our overall approach to assessing it. We explain how our approach is consistent with that used by the Office for Budget Responsibility (OBR) for the UK and by fiscal institutions in other countries. As the Scottish Government is a devolved administration operating within a fiscal framework agreed with the UK Government, we have a slightly different measure of sustainability to these other countries. We also need to consider the interdependencies between the sustainability of the Scottish and UK governments' budgets as a result of the devolution arrangements.

1.3 In **Chapter 2** we consider projections of Scotland's population and economic growth, which are the basis for our spending and funding analysis. **Chapter 3** covers our projections for Scottish Government spending, with an explanation of the most substantial drivers of growth. In **Chapter 4** we present projections for funding and explain how the constitutional arrangements affect different areas of funding. Finally, **Chapter 5** provides our conclusions on fiscal sustainability for the Scottish Government, bringing together the spending and funding projections.

1.4 By setting out future fiscal challenges for the Scottish Government we hope this report can support a wider conversation about public services over the next 50 years. Our intention in this report is to inform a debate, not just about policies a decade or more from now, but about decisions that need to be taken now to help prepare for the future.

What is meant by fiscal sustainability?

General approach to fiscal sustainability

1.5 It is now common for Fiscal Sustainability Reports (FSRs) to be produced in many countries. These typically use projections of a small number of key drivers such as population to model how government spending and funding evolve over the long-term. This is done while holding the broad shape of current policies constant. For example, these spending projections are based on the assumption that the broad level of the provision of public services stays the same throughout the horizon.[5]

1.6 The projections are inherently different to medium-term forecasts, such as those we publish twice a year, which rely on detailed modelling of a multitude of factors and a full articulation of government policies to provide our best forecasts of the path of spending and funding over a five-year horizon. The main aim of the long-term projections is to highlight how broad trends will affect the public

[5] More information on the assumptions for holding current policy constant is presented **Annex A**.

finances over time, rather than provide a specific point estimate. Therefore, we use the term 'projection' rather than 'forecast' throughout this long-term analysis.

1.7 We use the analysis to provide an insight to the scale of changes that may be required in terms of overall spending and tax decisions. Although there is uncertainty about the scale of the challenges, those shown by the fiscal sustainability analysis are real and these are what our report focusses on.

Assessing fiscal sustainability

1.8 Fiscal sustainability usually involves an assessment of whether, based on an assumption of unchanged policy, spending will match the revenue raised over the long-term. The annual budget gap between spending and funding leads to an adjustment to the level of public debt, with a judgement then made on the sustainability of both the of the public sector debt path and the annual fiscal gap. High levels of debt can result in government funds being diverted from investment and public services to servicing the debt, which may be unsustainable.

1.9 The fiscal arrangements for the Scottish Government under the constitutional settlement are different. It is required to run a broadly balanced budget each year, and has very limited powers to borrow. Therefore, highlighting issues around Scottish fiscal sustainability now raises attention to how current Scottish Government policy may not be sustainable over the long-term.

Other Fiscal Sustainability Reports

1.10 Fiscal sustainability reports produced by various Independent Fiscal Institutions (IFIs) in other countries aim to illustrate a long-term outlook of the public budget if the current fiscal structure and policies are maintained through projecting these continuous trends.

1.11 We reviewed FSRs from the UK, Ireland, Germany, Switzerland, New Zealand and from devolved administrations in Ontario (Canada) and Victoria (Australia).[6] Throughout our review of these reports by other IFIs, we noticed the same themes across all governments in question. All governments are likely to face long-term fiscal pressures, and ageing populations and fiscal sustainability issues will arise for governments around the world.

1.12 The Scottish Government's pressures are not unique in this context. However, due to the devolved nature of the Scottish Government and its fiscal framework with the UK Government, we have assessed the sustainability of devolved public finances in a different way.

Sustainability in the devolved context

Fiscal sustainability under the Scottish Government's fiscal framework

1.13 The fiscal framework agreement between the Scottish and UK governments sets out the mechanisms for fiscal transfers between the two governments and its rules affect how we can assess fiscal sustainability.

[6] FSRs we reviewed include: Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link), Federal Department of Finance (2021) Report on the long-term sustainability of public finances in Switzerland (link), Federal Ministry of Finance (2020) Report on the Sustainability of Public Finances (link), Financial Accountability Office of Ontario (2020) Long-Term Budget Outlook: Fiscal Implications of the Government's Program Reforms: 2020-2050 (link), Irish Fiscal Advisory Council (2020) Long-term Sustainability Report (link).

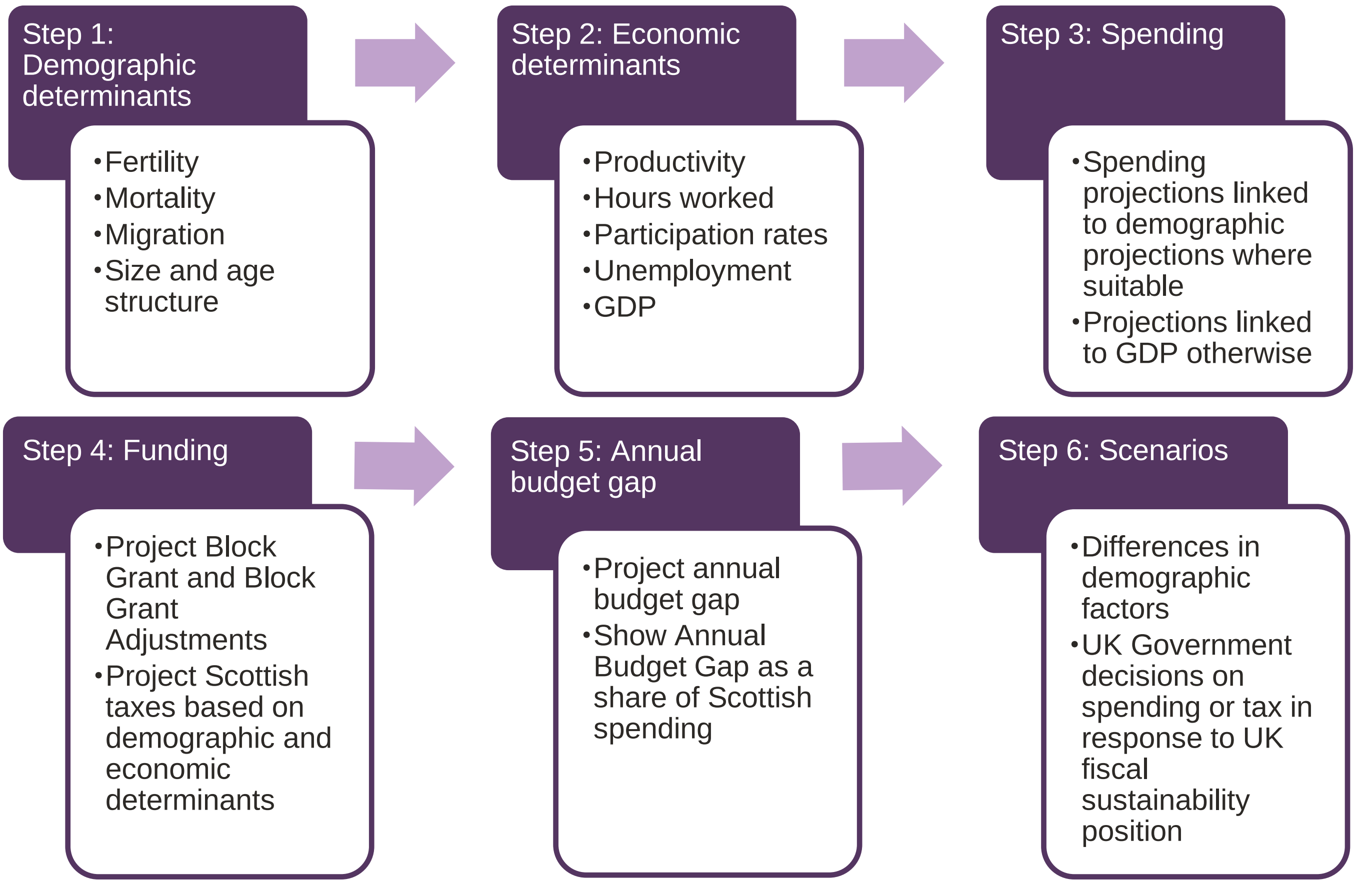
1.14 We project the Scottish population, economy, spending and funding in the same way as other FSRs. The Scottish Government has limited borrowing powers under the fiscal framework. It cannot accumulate substantial debt and is required to have a largely balanced budget. This means that we present our results differently to other FSRs.

1.15 Our analysis of fiscal sustainability focusses on funding and spending within a given year, rather than an accumulation of savings or debt. It indicates the scale of adjustment required each year to maintain a balanced budget. The effect of past government activity cannot be captured in our sustainability analysis as it cannot be carried into the funding position of future years.

1.16 Our analysis focuses on the changes that would arise in public spending if public services were to be maintained as they are now over the next 50 years, considering the pressures of an ageing population and other factors such as rising wages. We project the funding the Scottish Government would obtain from taxation and the Block Grant, assuming current policy and the current fiscal framework based on the projected population and economy.

1.17 We have assessed the difference between funding and spending each year and how this would evolve over time. This difference illustrates the changes the Scottish Government would need to make in each year to ensure that funding and spending will match, and that it will meet the balanced budget requirements. Figure 1.1 shows our approach to assessing fiscal sustainability.

Figure 1.1: Methodological approach for assessing Scottish fiscal sustainability



Source: Scottish Fiscal Commission

1.18 Our Annual Budget Gap (ABG) assessment is therefore different from measures such as the deficit and debt-to-GDP ratios used by other IFIs in assessing sustainability. Care must be taken when comparing the Scottish Government ABG to other nations' deficit or debt-to-GDP ratio, as the ABG cannot accumulate as debt over time. The effect of past government activity cannot be captured in our sustainability analysis as it cannot be carried into the funding position of future years.

Scottish and UK Government interdependencies

1.19 Understanding the Scottish Government's long-term fiscal sustainability requires consideration of the interdependencies between the UK Government's and the Scottish Government's spending and funding. UK Government fiscal policy affects the available funding for the Scottish Government as the Block Grant is determined by its spending in England, Wales and Northern Ireland on devolved areas such as health and education. Many of the challenges Scotland faces in achieving fiscal sustainability are shared across the UK, and through its responsibility for main UK-wide taxes and UK spending totals, this risk is, in part, managed by the UK Government too.

1.20 The net Block Grant made up approximately 60 per cent of funding to the Scottish Budget in 2022-23.[7] It is determined by UK Government spending in areas devolved to the Scottish Government, which means that Scottish Government funding is closely linked to UK Government spending decisions. Ultimately the UK Government's fiscal policy strongly influences the level of funding the Scottish Government receives. If spending by the UK Government in devolved areas such as health increases, then the Scottish Government receives additional funding. Similarly, if the UK Government reduces spending, then Scottish Government funding is reduced.

1.21 The Block Grant Adjustments (BGAs) for taxes devolved to Scotland are determined by tax revenues in England and Northern Ireland and relative population change. Scottish tax revenues must then be compared to their BGAs to assess their actual contribution to funding, known as the tax net position. Scotland's economic performance relative to the rest of the UK, changes in the size of the respective populations, and both Scottish and UK Government tax policies matter to determine the tax net position

1.22 There is a similar increase in funding through BGAs for devolved social security payments. The level of funding received by the Scottish Government is based on changes in UK Government spending on the equivalent benefits in England and Wales and relative population change.

1.23 It is through the Block Grant and BGAs that the overall fiscal sustainability of the UK has implications for future Scottish Government budgets. The Office for Budget Responsibility (OBR) assesses UK fiscal sustainability in its FSR, and we refer to its analysis when considering how UK-wide sustainability issues could influence long-term projections for the Scottish Government budget

1.24 The OBR has published FSRs annually between 2011 and 2020, with Fiscal risk reports published in intervening years. In July 2022, the OBR combined these into a Fiscal risks and sustainability report.[8] The FSRs include 50-year projections of public spending, revenue, borrowing and debt, and consider how the UK Government debt stock will evolve if tax and spending continue as projected.

1.25 Typically, demographic ageing is a substantial challenge for the sustainability of a nation's public finances. This applies to Scotland, but interdependency with the UK means that relative differences between Scotland and the UK are also a factor. For example, the Barnett formula for Block Grant funding uses Scotland's relative share of the UK population.

[7] The net Block Grant is Scottish Government funding from UK Government spending, net of adjustments for devolved tax revenues and social security payments. For more information on how the Block Grant is calculated, see HM Treasury (2021) Statement of funding policy: Funding the Scottish Government, Welsh Government and Northern Irish Executive (link).
[8] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link)

1.26 In its 2022 Fiscal risks and sustainability report, the OBR concludes that, based on its projections for spending and taxation, public debt is on an unsustainable path in the long term. Future UK Government responses to these pressures are likely to have consequences for the Scottish Government's funding position. Therefore, we account for how UK Government policies will affect the Scottish Government's own fiscal sustainability. It is important to note that these pressures would exist for Scotland even if it was fully fiscally autonomous, but under the fiscal framework this risk is managed by the UK Government.

1.27 If the UK Government responds to the pressures by reducing spending in devolved areas, it would affect the Scottish Block Grant negatively. Spending reductions in reserved areas would not affect Scottish Government funding, though people in Scotland would experience these cuts too, for example through changes to payments for reserved social security benefits paid by the UK Government to people in Scotland. Similarly, UK Government changes to devolved taxes affect the Scottish Government's funding. For example, if the UK Government increases income tax revenues, then the BGA for income tax would increase, and all else equal this would reduce Scottish Government funding. With each change in devolved tax policy by the UK Government, the Scottish Government needs to decide whether to alter tax policy too or change its spending plans to match the new level of funding.

1.28 The interdependencies between the Scottish and UK governments bring additional complexity to the fiscal sustainability analysis we present in this report. Approaches typically undertaken in FSRs, such as applying high and low population scenarios, can lead to counterintuitive results as the relative position with the UK is an important factor. Overall, the interdependencies mean that the fiscal sustainability of the Scottish Government cannot be considered in isolation, so our overall findings present the implications of the UK situation to the position for the Scottish Government.

Devolution arrangements and constitutional framework

1.29 Our report focusses on the Scotland's public finances based on the current devolution settlement and we assume it continues unchanged in our long-term projections. The Scottish Government and HM Treasury are due to review the fiscal framework. The outcome of the review is uncertain, and some parts of the existing framework and Scotland Act 2016 have not yet been implemented.[9] In our future work we may reassess our assumption on the constitutional position and consider the Scottish Government's approach to constitutional change and independence.

1.30 A full assessment of the public finances and the fiscal sustainability of an independent Scotland would depend on many factors including those affecting the starting position, any transition period, as well as long-term future trends. These factors include the outcome of negotiations with the UK Government on the set-up arrangements, for example any division of assets and liabilities. The Scottish Government would also need to make a wide range of macroeconomic policy decisions, including on currency, which would have implications for fiscal sustainability. Robust assumptions about Scotland's relative economic performance, including any contingencies for different paths to a new 'steady-state', would also be important.

1.31 However, many of the trends we consider in this report, such as the likely changes in Scotland's population structure, will be powerful factors that will have a major bearing on long-term fiscal sustainability whatever constitutional settlement is in place.

[9] Value Added Tax assignment has been delayed, and the Scottish Parliament is not yet responsible for Air Passenger Duty or Aggregates Levy. The timelines for these powers to commence are uncertain, so we do not include these in our assessment of the Scottish Government's fiscal sustainability.

Unchanged policy

1.32 Our medium-term forecasts are the starting point for our long-term projections. We set out five-year forecasts for the economy, tax and social security alongside the Scottish Budget for 2023-24 in our Scotland's Economic and Fiscal Forecast publication in December 2022.[10] This has informed the first five years of the projections in this report.

1.33 For our medium-term forecasts we ask the Scottish Government for information on its confirmed policies. Where policy is not firm, we assume existing policy continues for our five-year forecast horizon, such as the freeze to the income tax higher rate threshold which we assume continues to 2027-28. From 2028-29 onwards we assume there will be no changes to tax or spending policies.

1.34 **Annex A** provides a more detailed description of our approach to applying the unchanged policy assumption. For spending we assume the future level of provision of public services remains in line with current levels. However, in some areas we have had to modify how we apply 'unchanged policy' for the long-term projections. For example, in our five-year forecasts the higher and top rate income tax thresholds have been assumed fixed in Scotland and other thresholds rise with inflation. Assuming this over a 50-year projection would result in earners moving into higher bands as earnings typically rise more quickly than inflation. It would also result in the average tax rate rising and more income being subject to higher taxation. We therefore grow rates and bands in line with average earnings because allowing fiscal drag to continue indefinitely would unrealistically inflate tax revenues. This is consistent with how other Independent Fiscal Institutions (IFIs) project taxation in the long term.

Short and medium-term challenges

1.35 In this report, we focus on long-term challenges to Scottish Government finances. In our Scotland's Economic and Fiscal Forecasts publication in December 2022, we presented our forecasts up to 2027-28.[11] This identified the short and medium-term challenges facing the Scottish Government. The high level of inflation recorded in 2022 is expected to have a substantial impact on household incomes and living standards. For the Scottish Government, high inflation was expected to lead to challenges in balancing its funding and spending plans.

1.36 While our five-year forecasts identified acute challenges in the short to medium term, we forecast that by 2027-28 economic growth and inflation would have Therefore, the current challenges affect the starting point for our long-term projections but the shocks from the next five years do not carry over returned to their long-term trends.

1.37 Our next five-year forecasts, which will be published on 25 May 2023, will provide updated analysis on the short and medium-term challenges facing the Scottish Government but these new forecasts will not change the main conclusions presented in this report.

[10] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link)
[11] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link)

Chapter 2
Economy and Demographic Projections

Demographic projections

Overview

2.1 The economic and fiscal projections in this report are underpinned by population projections. Population projections are based on assumptions on birth rates, mortality rates, and migration levels.

2.2 As discussed in **Chapter 1**, devolved funding is sensitive to how Scotland's population changes relative to the population of the rest of the UK, so we need to produce comparable projections for both.

2.3 For the rest of the UK, we use the 2020-based interim projections published by the Office for National Statistics (ONS) in January 2022.[12,13] For Scotland, from 2028-29 onwards we use assumed birth rates, mortality rates, and migration levels consistent with the same set of ONS projections. Our medium-term view up to 2027-28 is aligned to our December 2022 Scotland's Economic and Fiscal Forecasts, which forecast a higher Scottish population than the ONS projections.[14]

2.4 Under these assumptions, the Scottish population starts to fall in 2030-31, and by 2072-73 is 8 per cent below its current level. Meanwhile, the UK-wide population keeps growing until 2060, levelling out at around 6 per cent higher than its current level by 2072-73.

Births, mortality and migration

Births

2.5 Recent birth rates in Scotland have been lower than in the rest of the UK, and lower than international standards. Our population projections assume that this continues, in line with ONS assumptions. Women in Scotland are assumed to have 1.3 children on average, compared to 1.6 for the whole of the UK. Under these assumptions, the number of births in Scotland is projected to remain below recent levels throughout the projection. We expect Scotland's birth rate, to fall in most years, and to fall as a share of total births in the UK.

Mortality

2.6 From 2023 onwards we use the ONS principal 2020-based mortality assumptions.[15] Under these assumptions, life expectancy improves in the long term, after a temporary increase in mortality rates

[12] Office for National Statistics (2022) 2020-based interim national population projections (link).
[13] Note that this differs from the projections in the Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link) report, which used a lower migration assumption, and that we have not used the new projections published by ONS in January 2023.
[14] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).
[15] Office for National Statistics (2022) National population projections, mortality assumptions: 2020-based interim (link).

during the Coronavirus (COVID-19) pandemic. Scotland has higher mortality rates and lower life expectancy than the rest of the UK. This is projected to continue with a slight narrowing of the gap.

Migration

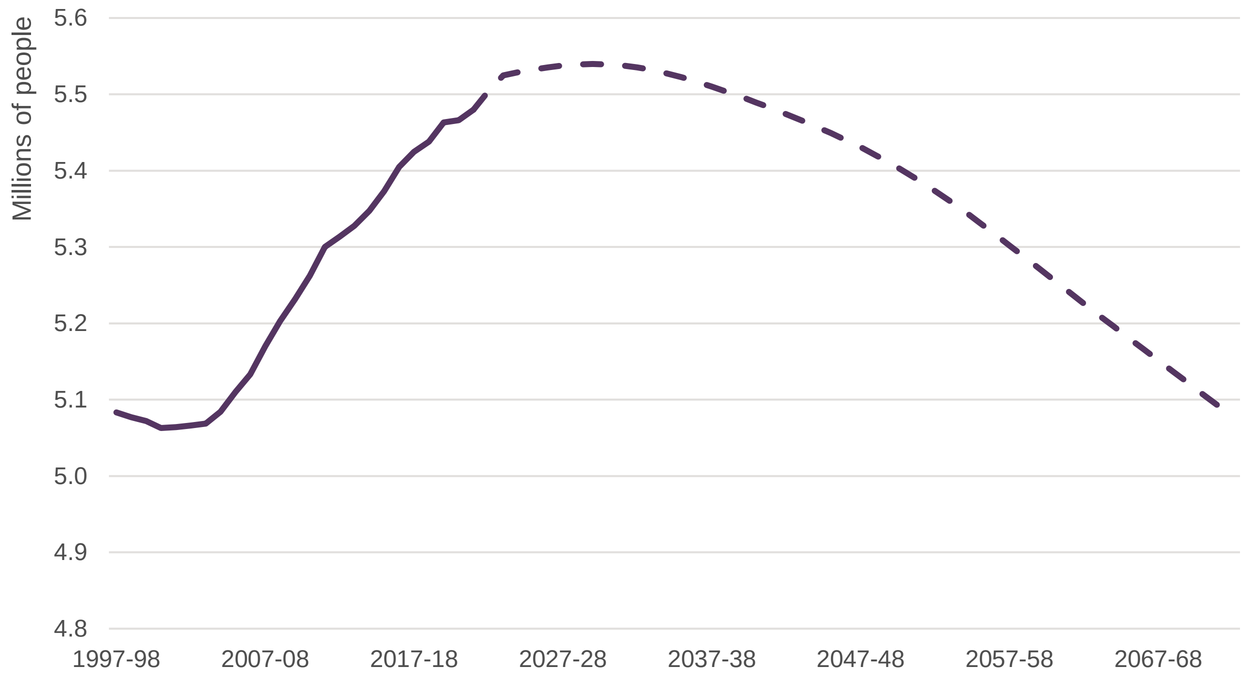
2.7 From 2023 onwards we use migration assumptions consistent with the interim 2020-based population projections published by the ONS in January 2022.[16] From 2027 onwards we assume that annual net UK international migration is constant at 205,000 people, of which 10,000 come to Scotland. These assumptions are based on the 25-year average from the mid-1990s up to 2020.

2.8 We also assume a continued inflow from elsewhere in the UK, averaging 9,000 a year. This means that once the migration movement within the UK is included, Scotland has a projected net annual inflow averaging 19,000.

Population size

2.9 Our combined assumptions on births, deaths and migration give a projection in which the Scottish population peaks at 5.5 million in 2029-30, then falls to 5.1 million, returning to around the levels of the late 1990s by the end of our projection period.

Figure 2.1: Projected Scottish population



Source: Scottish Fiscal Commission

Age structure

2.10 The past and projected fall in the number of births, combined with the projected increase in life expectancy means that Scotland's population is projected to age, with the average age in Scotland rising from 42 in 2022-23 to 49 in 2072-73.

2.11 By 2072-73 we project that children aged under 16 will be only 12 per cent of the population, down from 17 per cent in 2022-23, while 31 per cent of the population will be aged over 65, up from 20 per cent in 2022-23.

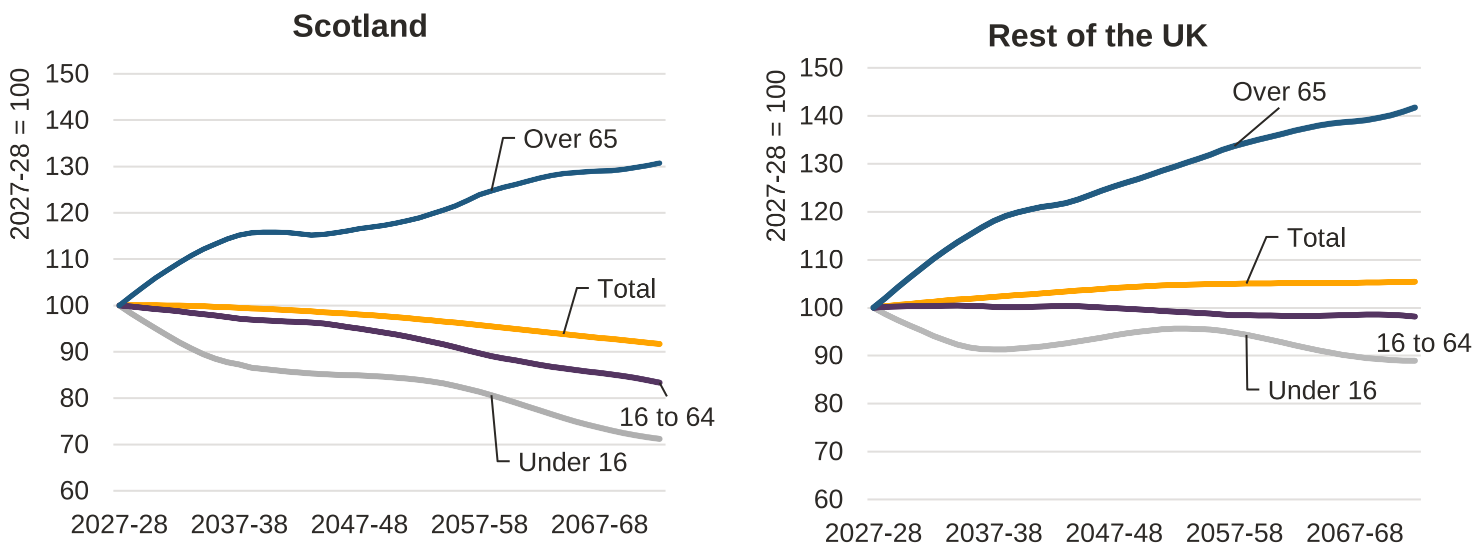
[16] Office for National Statistics (2022) National population projections, migration assumptions: 2020-based interim (link).

2.12 The number of people aged 16 to 64 falls throughout the projection period. As a proportion of the total population, they fall from 64 to 57 per cent in the period 2022-23 to 2072-73. This means that the dependency ratio rises. In 2022-23 there are 57 dependent people for every 100 aged 16 to 64, but by 2072-73 this is projected to rise to 74 dependent people.

Comparison to UK

2.13 Between 2022-23 and 2072-73 Scotland's share of the UK population is projected to fall from 8.1 per cent to 7.1 per cent. Figure 2.2 shows the population growth for each age group for Scotland and the rest of the UK.

Figure 2.2: Scotland and rest of UK population indices



Source: Scottish Fiscal Commission, Office for National Statistics (2022) 2020-based interim national population projections (link).

2.14 Both Scotland and the UK are projected to have a rapidly growing older population and fewer children, but Scotland's relatively lower projected birth rates mean that its 16 to 64 year old population is projected to fall at a higher rate compared to the rest of the UK. This means that Scotland's old age dependency ratio is projected to rise faster than the UK's. Scotland has an overall dependency ratio lower than the UK in 2022-23, as it has relatively fewer children, but by 2072-73 this is projected to be cancelled out by the faster fall in the number people aged 16 to 64. By the end of our projection both Scotland and the UK are expected to have 74 dependent people for every 100 people aged 16 to 64.

Figure 2.3: Projected dependency ratios for Scotland and the UK

Country	Age group	2022-23	2042-43	2072-73
Scotland	Under 16	26	22	21
Scotland	65+	31	41	54
Scotland	Overall [1]	57	62	74
UK	Under 16	30	26	26
UK	65+	31	40	48
UK	Overall	61	66	74

Source: Scottish Fiscal Commission

[1] The overall ratio is all people aged under 16 or 65+, compared to those aged 16 to 64.

Changes since August 2022

2.15 In our August 2022 paper on trends in Scotland's population, the population was projected to fall from 5.5 million in 2022 to 4.6 million in 2072.[17] The projection used in this report declines at a slower pace, falling by around 400,000 to 5.1 million. This is mainly because we now use a higher assumption on international migration.

International migration

2.16 In August 2022 our population projections mirrored the assumptions the OBR used in their Fiscal risks and sustainability report of that year.[18] The OBR used a 'low migration baseline', which was a population projection based on principal ONS assumptions in most areas, except international migration, where it chose the alternative '0 per cent net EU' migration assumption.

2.17 Recent data on migration has shown that while net migration from the EU has been low, total international migration has been higher than expected. Therefore, in their November 2022 forecast the OBR moved back to the principal ONS migration assumption.[19]

2.18 We also now assume a higher level of international migration in both Scotland and the rest of the UK. This is in line with the 2020-based projections published by the ONS and the NRS in January 2022. As a result, assumed annual net international migration increases from 4,000 to 10,000 for Scotland, and from 129,000 to 205,000 for the whole UK.[20]

Updated medium-term forecasts

2.19 Our new projection of the Scottish population is also aligned to our December 2022 forecast, which runs up to 2027-28.[21] This is largely based on the same assumptions as the January 2022 ONS projections but has higher levels of births, deaths and migration up to 2023, informed by recent data, and is aligned to the mid-2021 population estimate published by the NRS in July 2022.

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[17] Scottish Fiscal Commission (August 2022) – Trends in Scotland's population and effects on the economy and income tax (link).

[18] OBR (2022) Fiscal risks and sustainability – July 2022 (link).

[19] OBR (2022) Economic and Fiscal Outlook – November 2022 (link).

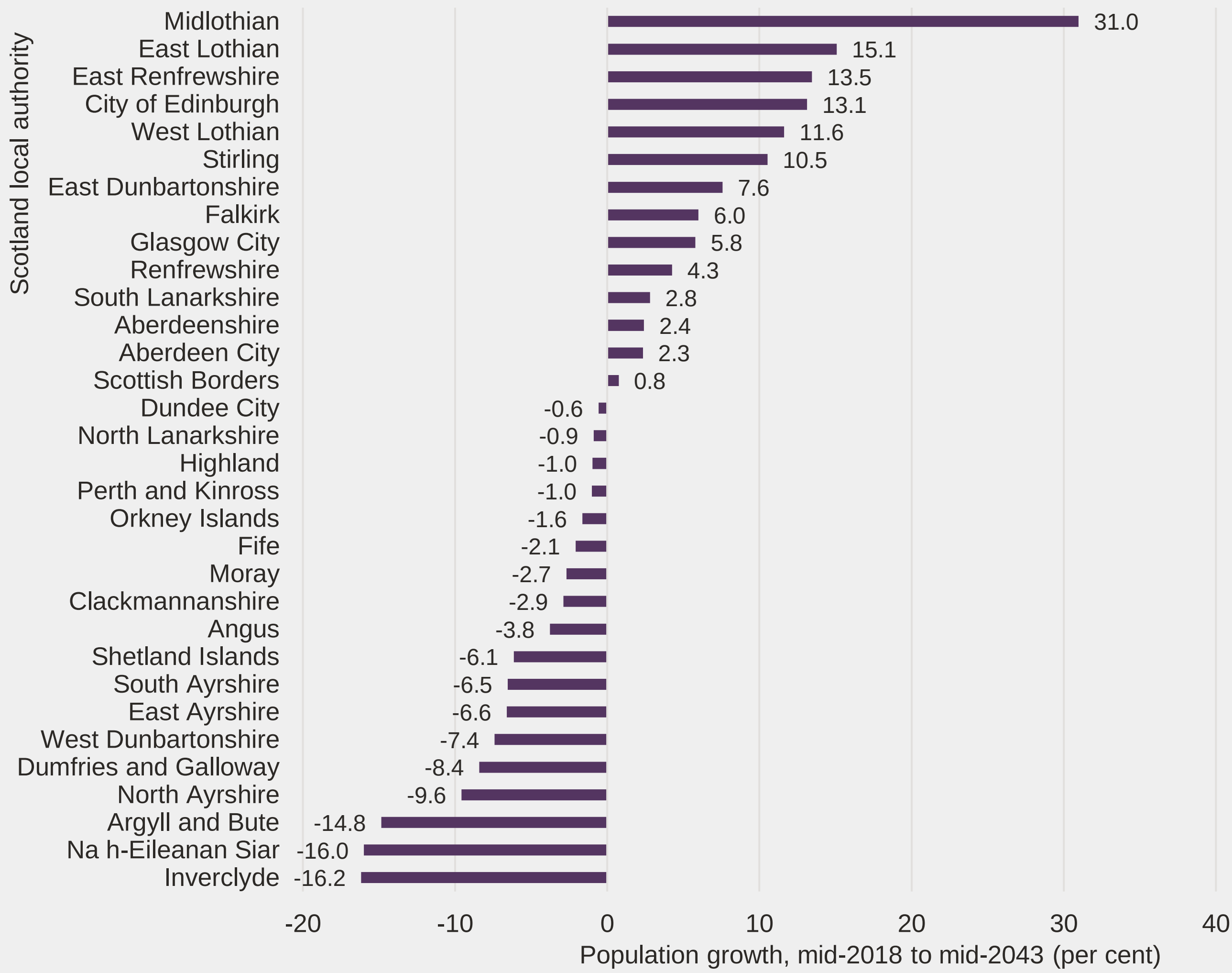
[20] Note that ONS released a new set of projections in January 2023 with a new, higher migration assumption, informed by recent high levels of migration. We have not used these new assumptions.

[21] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).

Box 2.1: Population growth by local authority in Scotland

Figure 2.4 shows NRS 2018-based projection of population growth by each local authority, from 2018-19 to 2043-44. Projected population growth varies from 31 per cent growth in Midlothian, to -16 per cent in Inverclyde.

Figure 2.4: NRS local authority population growth projections, mid-2018 to mid-2043



Source: Scottish Fiscal Commission, National Records of Scotland (2020) Population Projections for Scottish Areas (2018-based) (link).

In these population projections, the NRS project a growth in the population of Scotland of 2.5 per cent between 2018 and 2043. In our population projections used in this report, we project a growth of 0.5 per cent over the same period. We do not project population growth for each local authority.

These differences in population growth will lead to different pressures across local authorities in Scotland. Our projections for spending and funding associated with local authorities only look at the aggregate Scotland-level picture. Variation in population changes across local authorities will mean that different responses to fiscal risks will need to be considered for different areas.

Population variants

2.20 Later chapters in this report include analysis of how the fiscal position might change under different population assumptions. For these scenarios we only vary the Scottish population, to see how faster or slower population growth relative to the rest of the UK would change the fiscal position for

Scotland. The two low and high population variants are set out in more detail in **Annex A**, and are designed to mirror the low population and high population variants of the ONS 2018-based projections.

Economic projections

Overview

2.21 Our economic projections model is broadly in line with the OBR's approach for their March 2022 long-term economic determinants.[22] This approach is based on the main drivers of economic growth, namely how many people are in work and their level of productivity.

2.22 The projections account for differences in demographics between Scotland and the UK. By mirroring the OBR's assumptions, we can illustrate the effect of demographics on economic growth in Scotland compared with the UK.

2.23 The projections show how the economy might evolve given a specific set of assumptions about the size of the population aged 16 and over, the labour force participation rate, and productivity.

Participation rates

2.24 How many people participate in the labour force by working or by looking for work is an important determinant of economic growth. People over the age of 65 tend to have lower participation rates as they are more likely to be retired. This means that in the case of an ageing population, as we have projected for Scotland, we can expect the overall participation rate to decline.

2.25 We use different participation rates for different groups split by age and gender, and we project these forward taking account of the OBR's projected increases in the State Pension age (SPA).[23] This is a refinement from our August 2022 illustrative projections, where we held participation rates fixed over the 50-year period, but the broad results have not changed significantly as they are mainly driven by demographic trends. Compared to August 2022, the overall participation rate is higher in levels because of people staying in work for longer, but it is still projected to decline over time as Scotland's population ages.

2.26 Our approach is broadly consistent with the OBR's approach used in their UK projections. The participation rates by age and gender start from different levels in Scotland and the UK, which continue throughout the projections, but the pattern of change over time is similar to that of UK rates.

Productivity

2.27 We have aligned with the OBR in our productivity assumptions. We assume productivity will grow by 1.4 per cent a year until 2035-36, and by 1.5 per cent a year thereafter.

2.28 Scottish and UK-wide GDP growth rates are used throughout our projections of spending and funding. If we assumed different productivity growth rates for Scotland and the rest of the UK, our

[22] Office for Budget Responsibility (2022) Long-term economic determinants – March 2022 Economic and fiscal outlook (link).
[23] OBR assume the State Pension age will rise to 67 in 2028, 68 in 2039, and 69 in 2067. We match these assumptions in our projection of participation rates in Scotland. For more information on the OBR's assumptions, see OBR (2022) Fiscal risks and sustainability – July 2022 (link).

projections of funding and spending would be inconsistent with each other. This would potentially build bias into our measure of sustainability – the Annual Budget Gap (ABG).

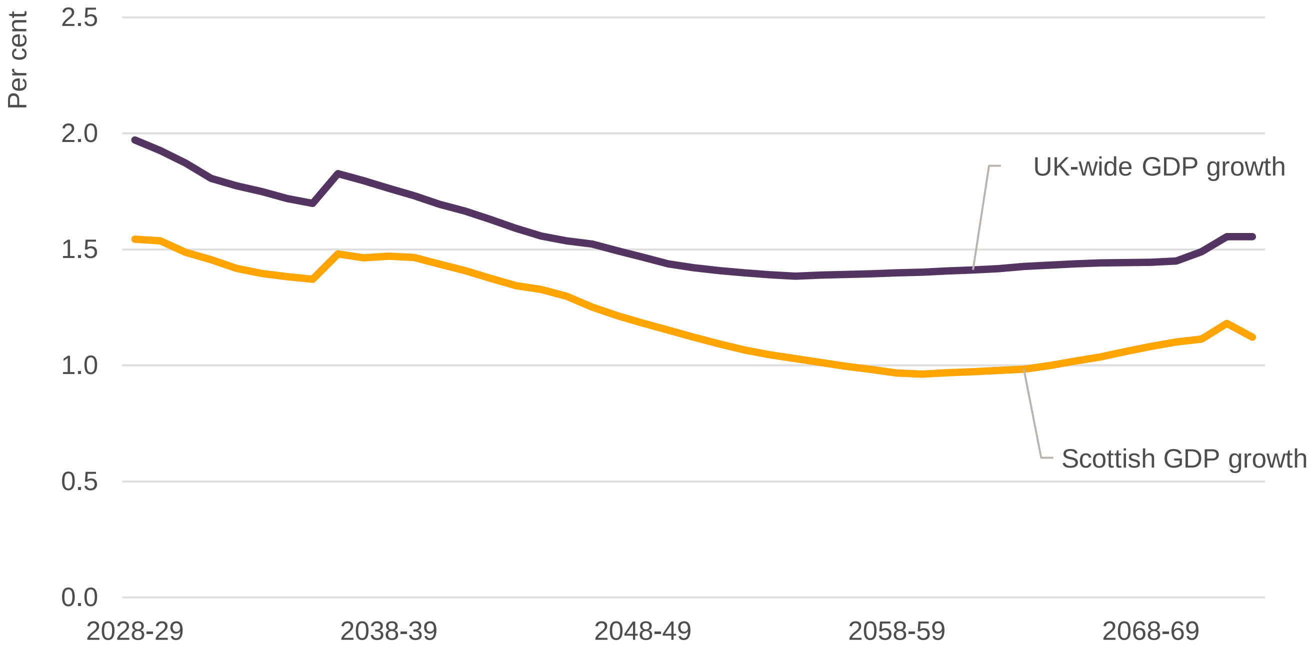
2.29 Demographic change may have an effect on productivity growth but the evidence on this is unclear. Introducing these changes would also make our projections inconsistent with the OBR. Therefore, we have not modelled a potential relation between ageing and productivity growth.

GDP for Scotland

2.30 Our economic projections show Scottish GDP growing by an average of 1.2 per cent each year between 2027-28 and 2072-73, 0.4 percentage points lower on average than the OBR's March 2022 projections show for UK GDP growth.

2.31 Figure 2.5 shows projected GDP growth per year for Scotland and the UK, with the primary difference being projected demographic change. Scotland's declining population and the influence of the ageing population on the overall participation rate drives the difference in GDP growth. A large part of the difference between Scotland and the UK is because Scotland's population aged 16 to 64 is projected to fall by 16 per cent over the next 50 years, compared with a fall of 2 per cent for the UK.

Figure 2.5: Projected GDP growth rate for Scotland and the UK

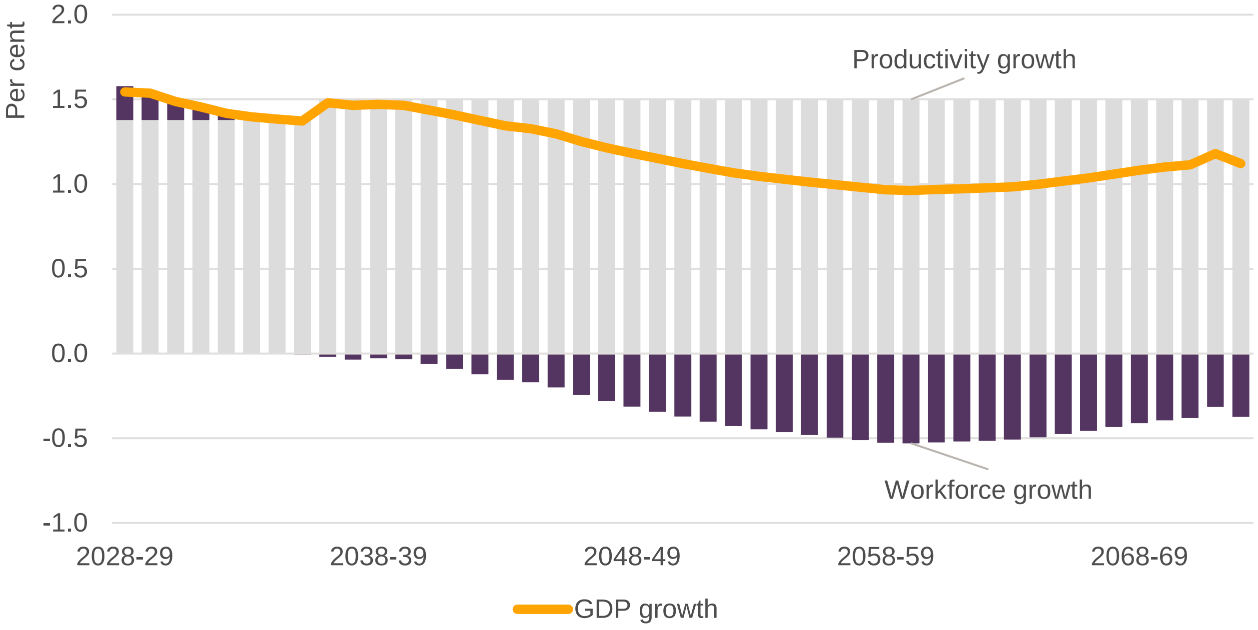


Source: Scottish Fiscal Commission, Office for Budget Responsibility (2022) Long-term economic determinants – March 2022 Economic and fiscal outlook (link).

Decomposition of GDP growth for Scotland

2.32 We show the drivers of economic growth by decomposing projected GDP growth into productivity growth and labour supply. Labour supply is affected by the size of the population aged over 16, unemployment rates, participation rates, and the average number of hours worked per week. The primary driver of long-term economic growth in Scotland is productivity, and for the purposes of these projections we have assumed productivity growth in Scotland mirrors growth in the UK. Figure 2.6 shows that from the start of the 2040s onwards, productivity growth is offset by reductions in labour supply.

Figure 2.6: Components of projected Scottish GDP growth



Source: Scottish Fiscal Commission

Chapter 3
Spending projections

Overall spending

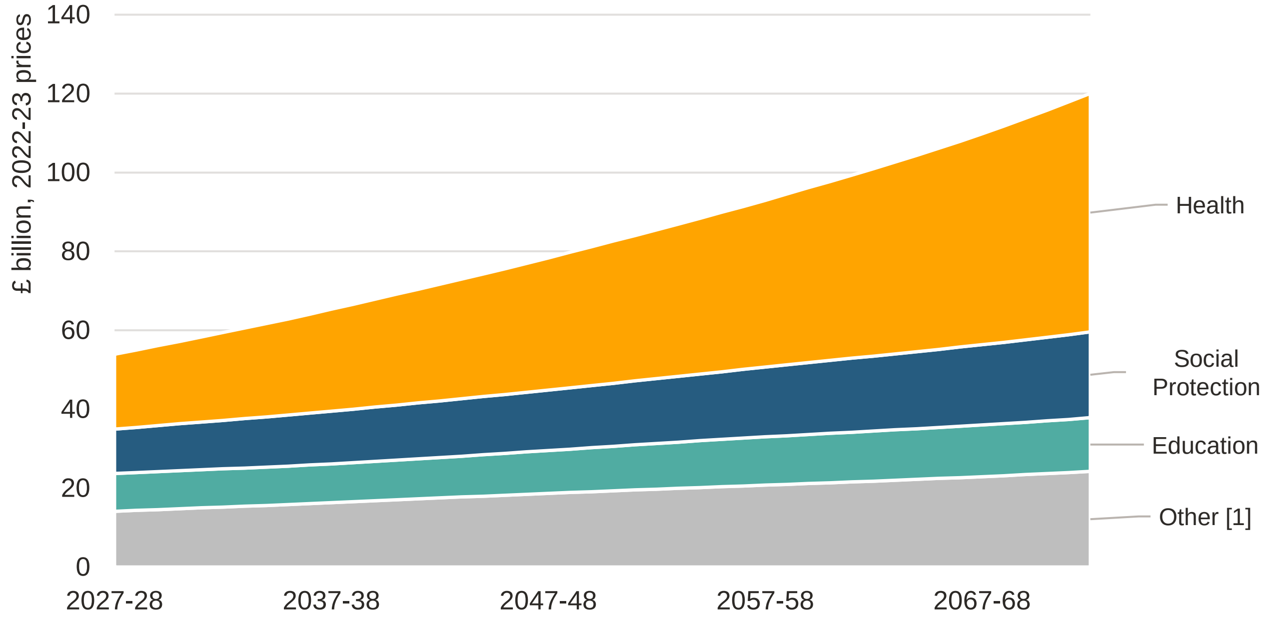
3.1 Total spending on devolved public services (by both the Scottish Government and Scottish local authorities) is forecast to be £54 billion in 2027-28.[24] By the end of our projection period, 2072-73, we project that this spending will have grown by 123 per cent in real terms to £120 billion. This rate of growth is faster than that of Scottish GDP, which is projected to grow by 72 per cent over the same period.

3.2 Our methodology matches that used by the OBR for its projections of UK Government spending. It is also consistent with how we have projected UK Government spending on devolved areas such as health, which is the basis for our projection of funding from the Block Grant.

3.3 Our projection uses the latest available data for spending in Scotland, as well as a Scotland-specific population projection. Spending is divided into broad areas such as education and health.

3.4 Areas of expenditure such as health, social care, social security and education are influenced by the size and structure of the population. Our projection of health spending also reflects the effects of technological advances and the increased prevalence of chronic conditions.[25] This sees health spending grow more quickly than other areas. Health is projected to make up 50 per cent of devolved spending in 2072-73, increasing from 35 per cent in 2027-28.

Figure 3.1: Spending on devolved public services



Source: Scottish Fiscal Commission
[1] 'Other' includes devolved areas of spending such as transport, public order and safety, and recreation and culture.

[24] This is based on our estimates of available funding in the medium-term, with budgets assumed to be balanced until 2027-28.
[25] This matches the approach taken by the OBR, and is based on historical evidence on spending trends in health. This is set out in detail in the Health section of this Chapter.

3.5 Health is the component of public spending that grows the most, growing to 18 per cent of Scottish GDP by the end of the projection period, compared with 10 per cent in 2027-28. This growth matches the OBR projection for health spending in the UK, once demographic differences are taken into account.

Drivers of spending growth

3.6 Over the course of the projection, health accounts for 63 per cent of spending growth. This is largely a result of additional pressures from technological developments allowing for more advanced but also more expensive health interventions, and the increased prevalence of chronic conditions.

3.7 Education has a minor effect on overall spending growth, reflecting a falling number of younger people.

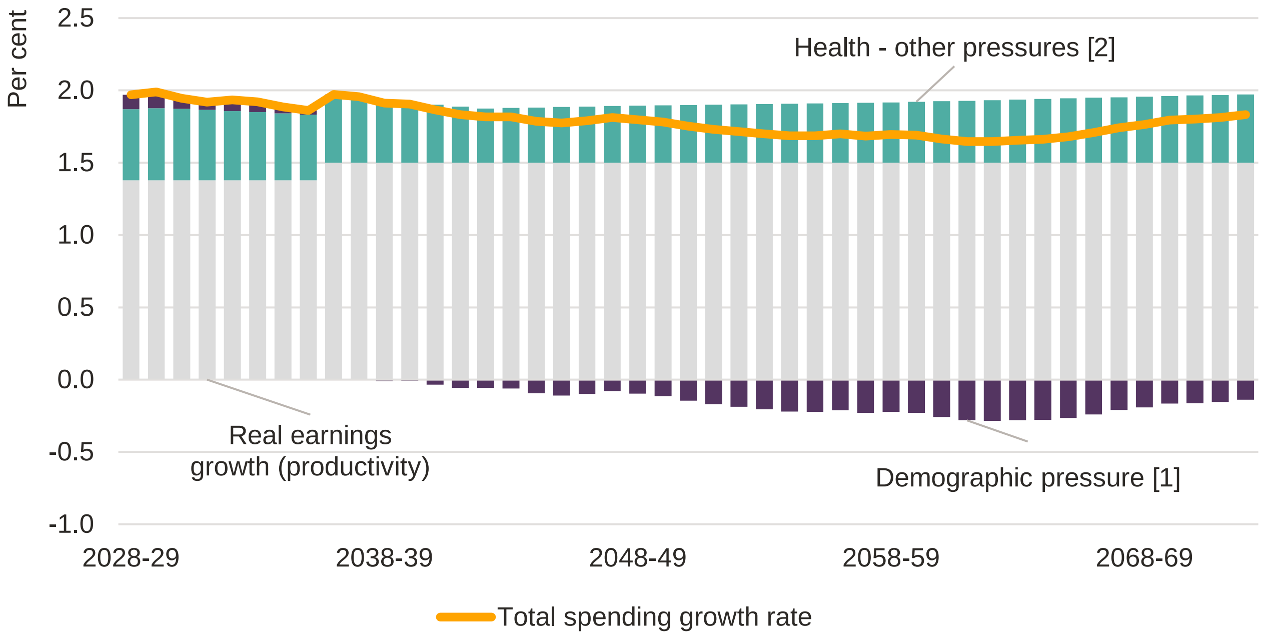
3.8 Spending on social protection includes adult social care and social security benefits. While the ageing of the Scottish population puts pressure on spending in these areas, the falling total population mitigates this pressure.

3.9 All other areas of spending are projected to grow in line with Scottish GDP. As economic growth slows in the later years, so do our projections in spending on areas like transport, police services, and environmental services that are provided by the Scottish Government and Scottish local authorities.[26]

3.10 On average, overall spending increases annually by 1.8 per cent in real terms. This is primarily due to increases in real wages across public services, and additional spending pressures from health, with our falling population more than offsetting the effect of the ageing of Scotland's population.

[26] The total Scottish population is projected to decrease by -0.2 per cent per year on average from 2027-28 to 2072-73. The demographic element of our GDP projection is projected to apply a downward pressure of -0.3 per cent, so per person spending without increases to productivity would decrease.

Figure 3.2: Drivers of overall annual spending growth



Source: Scottish Fiscal Commission

[1] Includes the effects of changing the State Pension age and, consequently, the rate of GDP growth and spending growth in other areas.

[2] In health, there are pressures which increase health spend beyond what can be explained by demographics. For example, rises in chronic health conditions or technological advances that allow more conditions to be treated.

Productivity and wages

3.11 In our long-term projection of GDP and income taxes, we assume that growth in productivity will lead to equal growth in real average earnings. Our projection assumes that wages in the public sector will grow the same rate as productivity to attract and retain staff. This growth in labour costs is an important element of our spending projection. The average annual rate of productivity growth over the course of our projection is 1.5 per cent.

3.12 We assume that social security payment values will increase in line with earnings from 2027-28 onwards. In the absence of this assumption the value of social security payments would decrease relative to the living standards of those in employment in the long-term projections. To avoid this effect, we match the OBR's long-term assumption that the value of benefits will increase with earnings.[27]

3.13 Productivity growth is an important factor across all our projections, and is modelled consistently throughout our spending, tax, GDP and Block Grant models, as well as those used by the OBR for the UK as a whole. For example, for our income tax projections higher productivity growth would lead to higher earnings and higher income tax revenue. As such, any change to our productivity assumption would affect income and spending to the same degree and would not alter the overall conclusions of this report.

[27] This assumption is discussed in Annex C of Office for Budget Responsibility (2011) Fiscal sustainability Report – July 2011 (link).

Health

Overview

3.14 Health accounts for over a third of all devolved public spending in Scotland.[28] This includes the provision of hospital services, outpatient services like general practitioners (GPs), and prescription drugs.

3.15 Health spending is primarily determined by the number of people the NHS looks after. The age and gender profile of the population also plays a role, with older people more expensive to care for. We capture these effects in our spending projections by using our population projection, which takes into account projected fertility and migration rates, as well as changes to life expectancy and mortality rates.

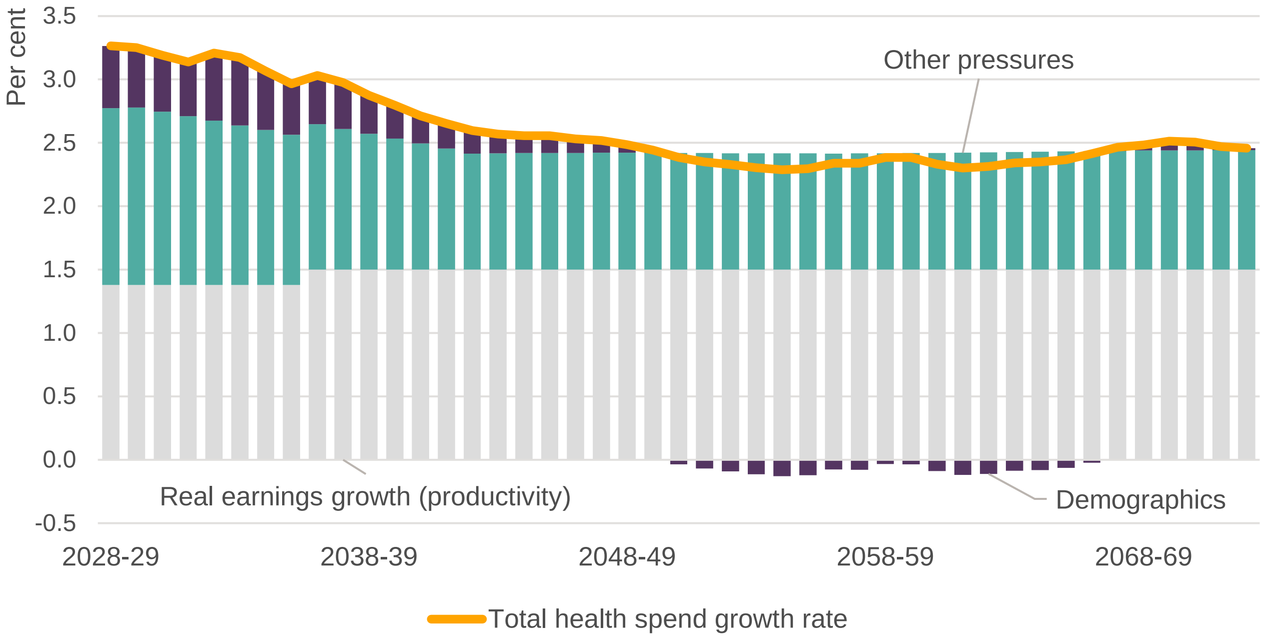
3.16 Health spending is also influenced by technological advances which, unlike other areas of the economy, have increased in costs in recent decades. In addition, our modelling reflects the increasing prevalence of long-term health conditions like obesity and dementia. These pressures mean that healthcare will be the most substantial pressure on public finances over the next 50 years. The OBR highlighted this as an important long-term pressure in its Fiscal risks and sustainability report.[29]

3.17 We project that health spending will grow in real terms from £19 billion in 2027-28 to £60 billion in 2072-73, an increase of 218 per cent. With Scotland's population falling during this period, spending per person will increase by 247 per cent. We project that health will take up an increasing share of public spending, growing from 35 per cent to 50 per cent of devolved public spending.[30]

3.18 Spending growth will be driven primarily by real wages (which we assume to grow in line with productivity) and other cost pressures. However, we expect demographic pressure to also contribute in the 2030s and 2040s, as shown in Figure 3.3.

[28] Scottish Government (2022) – 2023-24 Scottish Budget (link)
[29] OBR (2022) – Fiscal risks and sustainability – July 2022 (link)
[30] As health is a major area of spending for the Scottish Government, we plan to undertake more detailed fiscal sustainability work in this area in the future.

Figure 3.3: Drivers of spending growth in health



Source: Scottish Fiscal Commission

Projection basis

Medium-term projection

3.19 We project spending on health to grow in line with the 2023-24 Scottish Government budget and spending plans set out in the Resource Spending Review (RSR) to 2027-28.[31]

3.20 While the RSR indicates the policy priorities of the Scottish Government, spending plans ultimately rely on the funding available in each budget year. By aligning our medium-term health projection with the RSR, we assume that health will be protected to grow more quickly than overall funding available to the Scottish Government. The funding available for other areas of spending is adjusted accordingly, with the Scottish Government's budget assumed to balance during the medium-term period to 2027-28. From 2027-28 onwards our projection is not constrained by this assumption.

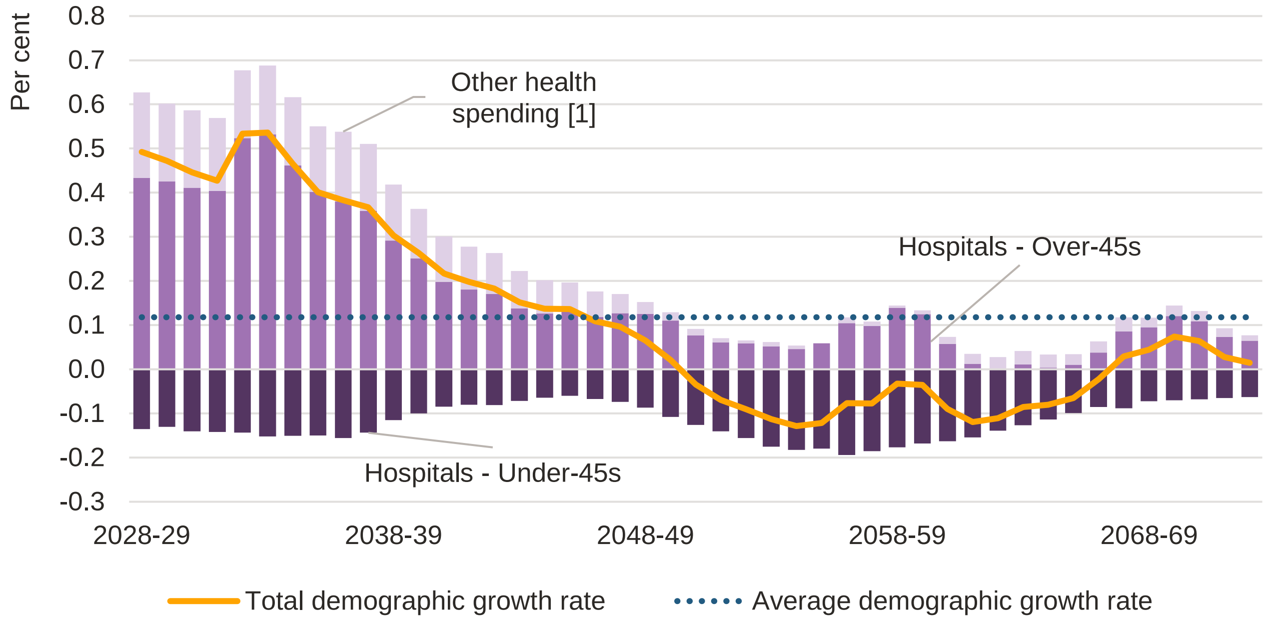
Demographics

3.21 All elements of our projection of health spending are influenced by the size and structure of Scotland's population. With Scotland's population falling over the course of the next 50 years, some pressure on the NHS is relieved. On the other hand, our population is getting older and caring for older people is more costly.[32]

3.22 We project that demographic pressure will contribute an average growth of 0.1 per cent per year to spending on health. In the earlier part of the projection, demographic pressure will be higher as our population rapidly ages. However, by the 2050s, these same projections mean reduced demand on the NHS for younger people will more than offset growing demand from older people. This is illustrated in Figure 3.4.

[31] Scottish Government (2022) – Resource Spending Review 2022 (link)
[32] Please see **Chapter 2** for more detail on our population projection.

Figure 3.4: Demographic spending growth in health



Source: Scottish Fiscal Commission
[1] Includes GP and dental services, prescription drugs and health capital investment.

3.23 The cost of healthcare for younger people, particularly children, will fall throughout our projection.

3.24 The demographic pressure on GP practices and pharmacy services will follow that of demographic pressure on hospital care for people aged over 45, with most of the growth being incurred in the 2030s and 2040s.

3.25 The number of people being provided with end-of-life care will grow until the mid-2040s, when the number of annual deaths begins to fall. Changes to life expectancy and mortality rates do not affect these costs.

Technology, chronic health conditions, and low productivity growth

3.26 Our projections of health spending incorporate additional pressures that contribute on average an additional 1.0 per cent of growth per year. This accounts for 39 per cent of the average annual growth rate in health spending. This component of the growth in health spending is presented in Figure 3.3 as ‘Other pressures’.

3.27 Historical demographic change cannot fully explain previous increases in health spending across the UK. The Organisation for Economic Cooperation and Development (OECD), in an international review, found that demographic effects have had a smaller impact on health spending compared with other factors.[33] The OBR has incorporated these findings in their projection of health spending in England.

3.28 OBR modelling of these pressures is based on NHS England estimates for non-demographic cost pressures.[34] The OBR assumes that these pressures reduce in size as health spending becomes a much larger part of public spending and the economy. While there may be England-specific elements that do not apply in Scotland, and Scotland-specific elements that do not apply in England, our approach for modelling these spending pressures matches that of the OBR.

[33] OECD (2013) Public spending on health and long-term care: a new set of projections (link).
[34] Office for Budget Responsibility (2016) Fiscal sustainability and public spending on health (link).

3.29 These other growth rates from additional pressures incorporated in our model converge to 1.0 per cent by the 2040s. Before then, these rates are projected to be higher, particularly for GP practices, dental services and drug prescriptions. The additional rates of growth applied to each area of health spending vary, so their relative importance changes over time as the shape of Scotland's population changes. This demographic sensitivity means that their overall effect is slightly different to that identified by the OBR in their projections for the UK.

3.30 One factor contributing to these additional rates of growth is technological advances, which tend to drive higher costs in health care in contrast to other areas of the economy. These advances can increase costs either by providing treatment for conditions for which previously there was no medical intervention available, or by providing existing treatments to more people.[35]

3.31 Increased rates of chronic health conditions also contribute to projected growth in health spending. These are in addition to increased rates of chronic conditions as explained by demographic change. For example, we expect the age-specific prevalence of obesity and dementia to increase. This is in line with the approach taken by the OBR, as detailed in its latest Fiscal risks and sustainability report.[36]

Social protection

Overview

3.32 Social protection is forecast to account for around 21 per cent of all devolved spending in Scotland by 2027-28, with around £11 billion incurred by the Scottish Government and Scottish local authorities. This spending includes devolved social security benefits (£7 billion), adult social care (£3 billion), and social work (£1 billion).

3.33 Social security and adult social care are the primary sources of spending growth over the next 50 years within social protection. Despite spending on social protection increasing over the projection, as a proportion it falls to 18 per cent of total devolved spending. Increases in social security spending accounts for 57 per cent of spending growth in social protection over the course of our projection.

Social security

Medium-term forecast

3.34 We use our December 2022 forecasts of devolved social security as the medium-term basis for our projections.[37]

3.35 Up to 2027-28, we forecast an increase in devolved social security spending. This is partly due to increases in the number of people receiving disability benefits, and partly due to the additional spending from the introduction of new policies unique to Scotland and the replacement of Department for Work and Pensions (DWP) payments since the devolution of social security powers. This includes additional spending that is associated with the introduction of child, adult, and pension age disability payments to replace payments previously administered by DWP. We expect the

[35] Note that such technological advances may lead to higher participation rates in the economy as medical conditions are resolved, or to longer healthy life expectancies. Neither of these two possible mitigating effects are incorporated in our modelling.
[36] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).
[37] Scottish Fiscal Commission (2022) Scotland's Fiscal and Economic Forecast – December 2022 (link).

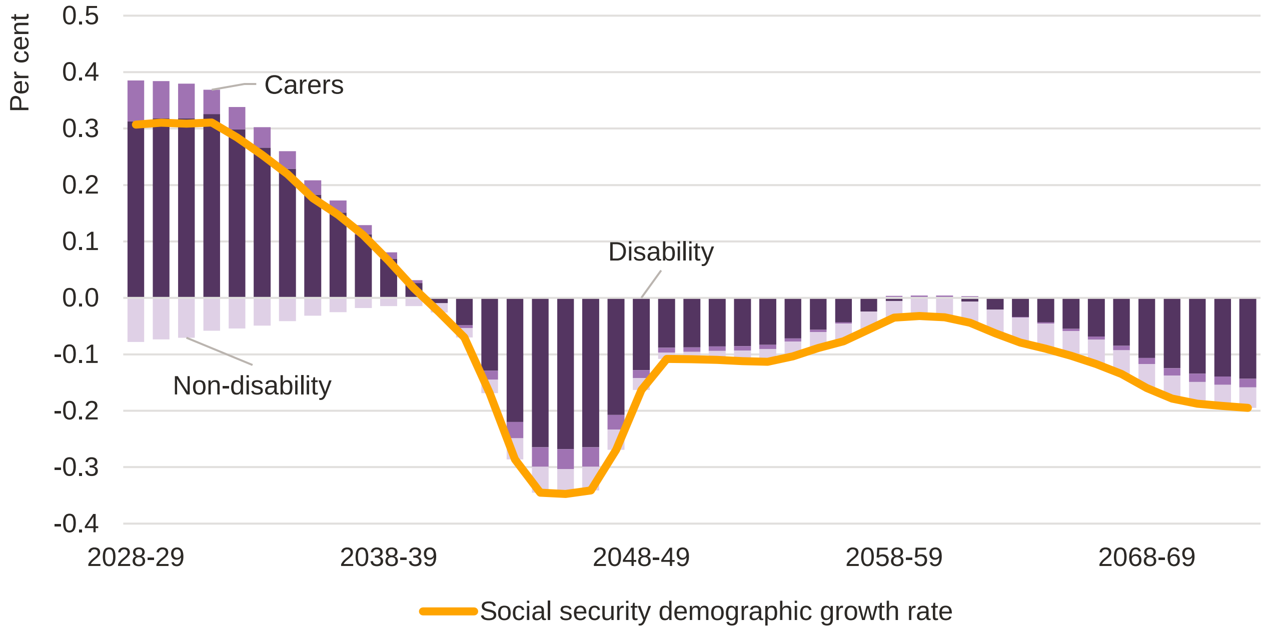
operational and policy changes introduced by the Scottish Government will lead to higher caseloads and higher average payments.

Demographics

3.36 In our long-term projection, social security spending is influenced by Scotland's population size and structure. In the first part of the projection, this leads to a projected increase in the number of people receiving disability-related benefits.

3.37 In the mid-2040s there is downwards demographic pressure as our modelling reflects the increase in the State Pension age. This has the short-term effect of reducing the size of the population over State Pension age, and with people over State Pension age more likely to receive social security benefits, it leads to a fall in caseload. For the rest of the projection period, population projections lead to less pressure on social security spending as Scotland's population falls.

Figure 3.5: Demographic spending growth by social security payment type



Source: Scottish Fiscal Commission
Note: Social Security payments included in this projection are detailed in **Annex A**.

Spending

3.38 We project that social security spending will grow from £7 billion in 2027-28 to £13 billion in 2072-73 in real terms. With Scotland's population falling during this period, per person spending will increase by 107 per cent.

3.39 Spending growth will be driven primarily by increasing social security payments in line with real wages. We estimate that changes introduced by the Scottish Government account for £1.4 billion of expenditure in 2027-28. That cost carries forward into the long-term projections.

Social security net position

3.40 For payments that replace UK-wide benefits, we compare funding received from the UK Government through social security Block Grant Adjustments (BGAs) with our forecast of spending to estimate the net position for these payments. The Scottish Government's changes to disability benefits leads to higher spending, which exceeds the BGA funding.

3.41 In addition to payments with BGA funding, the Scottish Government has introduced several new payments which do not receive specific funding. This spending must be met entirely from the Scottish Budget. Spending on the new payments is expected to increase from £0.6 billion in 2027-28 to £1 billion in real terms in 2072-73. The largest new payment is the Scottish Child Payment.

3.42 Overall, including payments with BGA funding and new payments, the difference between social security funding and spending is forecast to increase each year. We project spending to be £1.4 billion higher in 2027-28, rising to £3.2 billion in real terms by 2072-73. The funds for this difference need to come from elsewhere in the Scottish Government Budget.

Adult social care

Medium-term

3.43 In the medium-term, we project spending on adult social care in line with overall resources available to Scottish local authorities, including council tax and Non-Domestic Rates. This means that local authority budgets remain balanced until 2027-28.

3.44 Our projection both in the medium and long-term is based on the current model of social care provision. It does not incorporate the establishment of the National Care Service, and our projection is based on devolved spending statistics.[38]

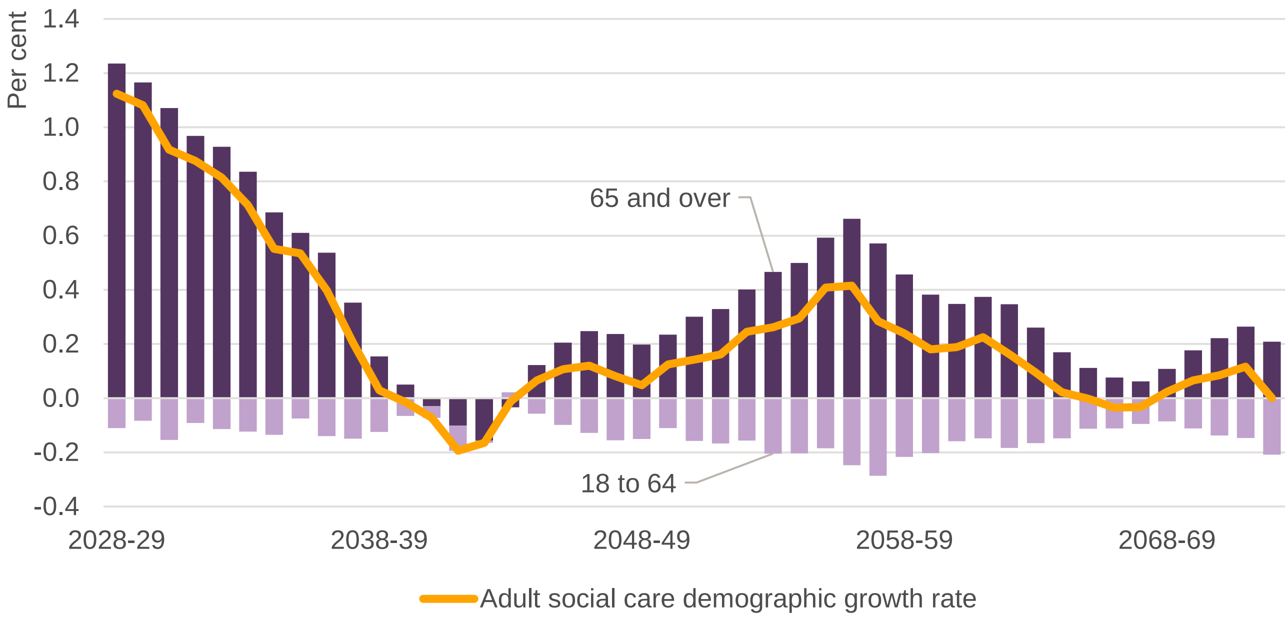
Demographics

3.47 Our projection of spending on adult social care is broadly in line with that of the OBR. We have built spending profiles based on current spending by age and projected forward in line with population change.

3.48 Demographic spending pressure in adult social care follows the pattern set by health, with care for older people providing upwards pressure through most of the projection.

[38] Scottish Government (2023) Scottish Budget 2023-24 Analysis by COFOG including 2021-22 and 2022-23 Comparative Data (link).

Figure 3.6: Drivers of demographic spending growth in adult social care



Source: Scottish Fiscal Commission

Spending

3.49 We project that adult social care spending will grow from £3 billion in 2027-28 to £6 billion in real terms by 2072-73. With Scotland's population falling during this period, spending per person will increase by 135 per cent.

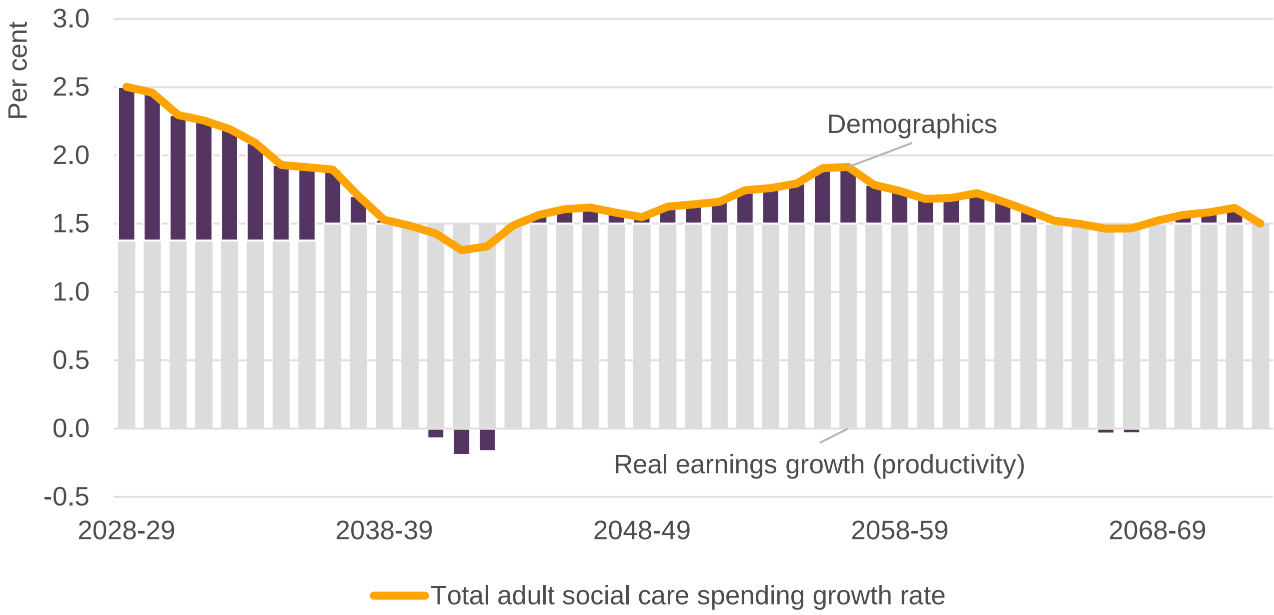
3.50 Spending growth will be driven by increased real wages. However, we expect demographic pressure to also contribute in the 2030s and 2050s, as shown in Figure 3.7.

3.51 Demographic pressure from Scotland's ageing population is partially offset by a projected fall in the number of younger people being supported for sickness and disability. A substantial proportion (around 40 per cent) of social care spending is on this younger cohort at the start of the projection period.

3.52 Adult social care has a reduced impact on spending pressure because we project spending on a net basis. We assume that the income local authorities receive from users of social care services increases in line with spending. local authority budget estimates for 2022-23 suggest that councils will receive income of over £2 billion from adult social care for people aged over 65 in that year.[39]

[39] Scottish Government (2023) Scottish Local Government Finance Statistics 2021-22 (link).

Figure 3.7: Drivers of spending growth in adult social care



Source: Scottish Fiscal Commission

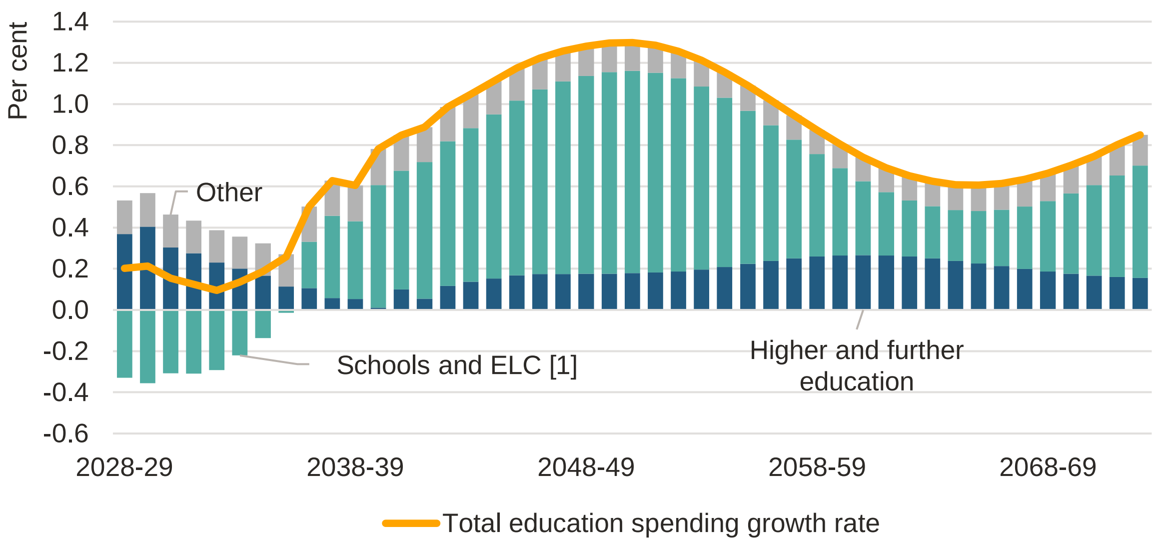
Education

Overview

3.53 We project that education spending will grow in real terms from £10 billion in 2027-28 to £14 billion in 2072-73. With Scotland's population falling over this period, spending per person increases by 54 per cent. Education spending falls from 18 per cent of all devolved public spending to 11 per cent.

3.54 Spending growth will be driven primarily by increases in real wages. Because of the falling number of young people in our population projection, we expect demographics to partly offset the growth in real wages. The effect of demographics on education spending is shown in Figure 3.8.

Figure 3.8: Spending growth in education by category



Source: Scottish Fiscal Commission
[1] Schools and early learning and childcare (ELC).

Projection basis

Medium-term projection

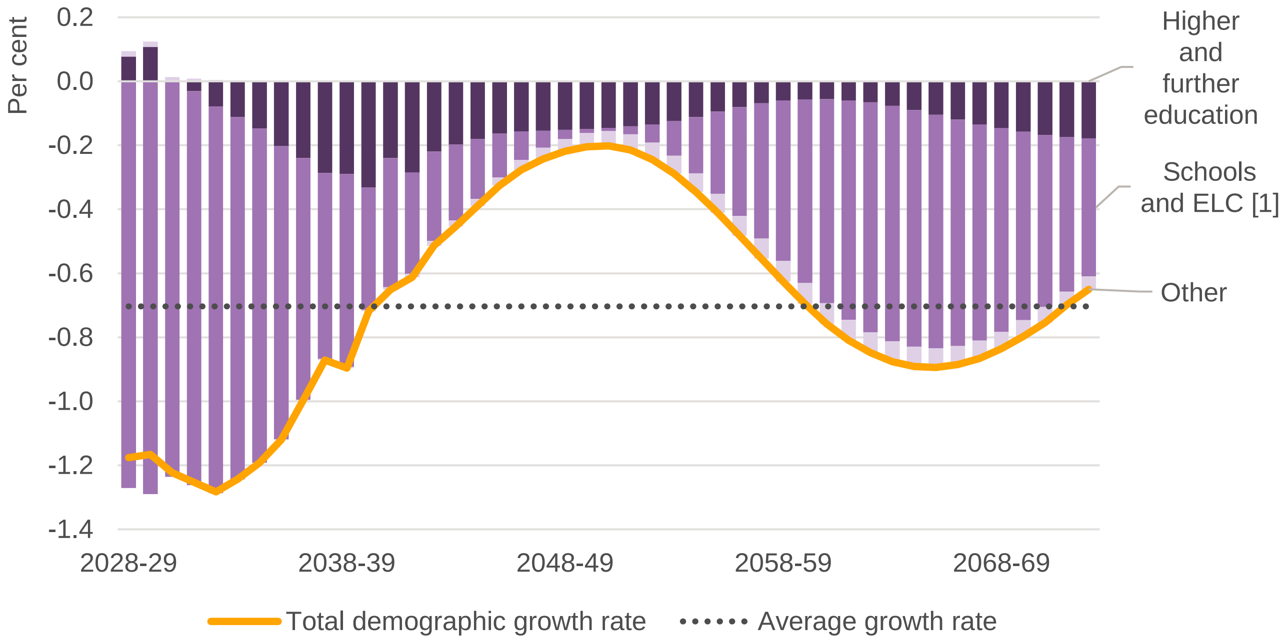
3.55 In the medium-term we project spending on education to grow in line with the resources available in the Scottish Government's and local authorities' budgets. This means that budgets at both levels of government are balanced in the medium-term.

Demographics

3.56 All elements of our projection of education spending are influenced by the shape and size of Scotland's population.

3.57 We project that, on average, demographic change will contribute to a fall in spending of -0.7 per cent per year, because of a falling number of younger people throughout our projection. This effect is particularly important in the earlier part of the projection. This is illustrated in Figure 3.9.

Figure 3.9: Demographic growth drivers in education



Source: Scottish Fiscal Commission
[1] Schools and early learning and childcare (ELC).

Other areas of spending

3.58 Other areas of spending will account for 26 per cent of devolved public spending in Scotland in 2027-28, with around £14 billion in spending across the Scottish Government and Scottish local authorities. Other devolved spending includes areas of expenditure such as transport, public order and safety, environmental protection, and recreation.

3.59 We grow these areas of spending in line with Scottish GDP, which means they represent constant proportions of GDP. We project that spending on these areas will be £24 billion in real terms by 2072-73. This represents a fall from 26 per cent in 2027-28 to 20 per cent in 2072-73 as a proportion of all devolved spending.

3.60 Demographics are important in our projection of Scottish GDP, so our projection of other areas of spending reflects a falling working-age population. However, with our overall population also falling, spending per person on other areas increases by 87 per cent within the projection period.

Population variants and comparison with England

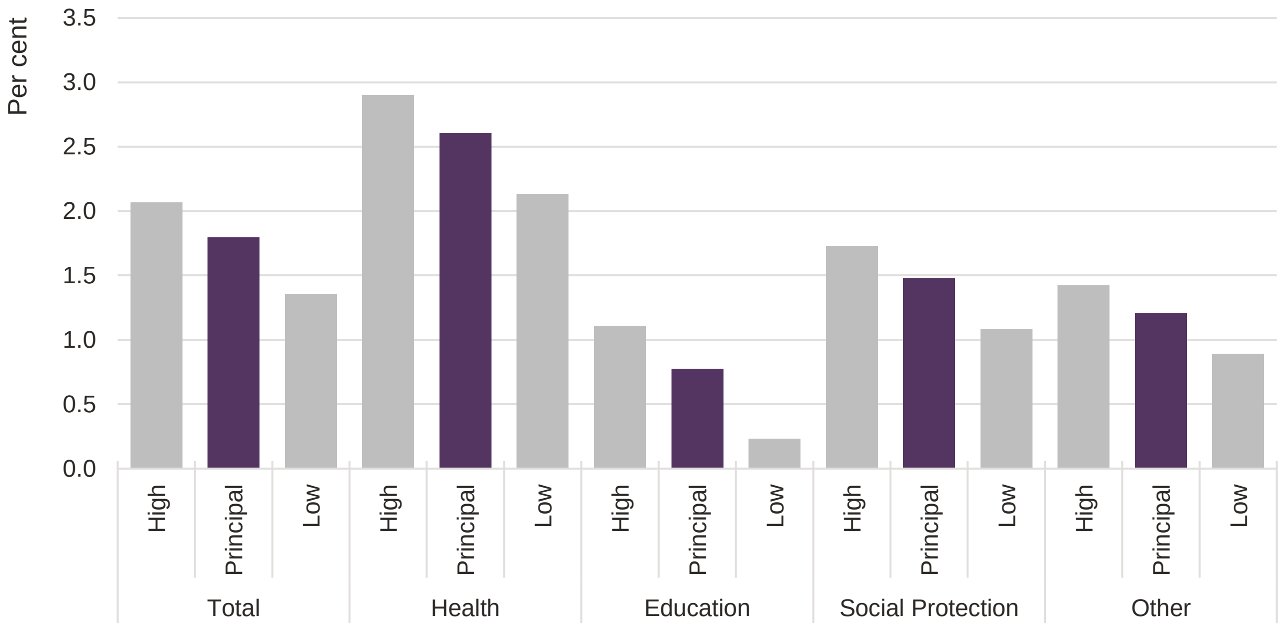
All spending – population variants

3.61 High population variants lead to higher spending, with increased numbers of people using public services. For example, higher fertility rates and net migration lead to more younger people, increasing education spending on schools and higher and further education, and longer life expectancies lead to more older people and an associated increase in spending on health.

3.62 Compared to the central population scenario, total spending is £15 billion higher by the end of the projection in the high population scenario. In the low population scenario, spending is £21 billion lower.

3.63 In 2072-73, over half of the additional spending resulting from a high population variant would be due to increases in health spending. Education spending is most sensitive to the different scenarios, with spending by the end of the projection 16 per cent higher in the high population variant, and 22 per cent lower in the low population variant.

Figure 3.10: Average spending growth with population projection variants



Source: Scottish Fiscal Commission

Health – population variants

3.64 Health spending is sensitive to changes to population projections. Under a high population projection, health spending grows at 2.9 per cent per year on average, compared with 2.6 per cent in the principal projection, leading to a substantial difference in total spending at the end of our projection period. In the low population projection variant, spending grows by only 2.1 per cent on average.

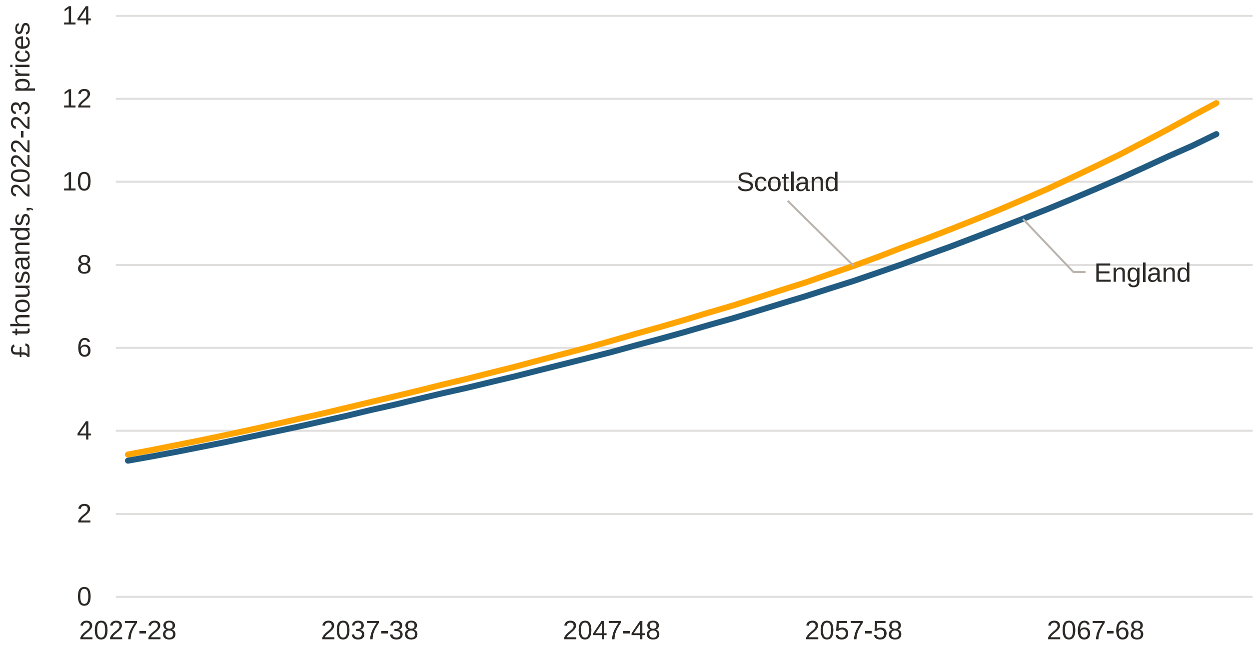
3.65 In the high population projection variant, demographics are a net contributor to health spending growth throughout the projection period, while under the low population projection variant, they decrease spending growth from the 2040s onwards.

3.66 The primary reason for the greater demographic pressure on health spending under the high population variant are changes in life expectancy interacting with our spending profiles. Our spending model does not reflect increases in healthy life expectancy that could be expected to accompany increases in overall life expectancy. Therefore, the high population variant sees the increase in the number of older people leading to a substantial increase in health spending on this cohort.

Health – comparison with England

3.67 Total health spending in England is projected to grow slightly more quickly than in Scotland. However, England's population is projected to grow over the 50 years, and the population is projected to fall in Scotland. This means that spending per person will grow more quickly in Scotland than in England. This is shown in Figure 3.11.

Figure 3.11: Comparison of health spending per person in Scotland and England



Source: Scottish Fiscal Commission

3.68 Part of the reason for the difference is that, with an estimate based on plans set out in the Scottish Government's Resource Spending Review 2022 and the UK Government's Spending Review 2021, we forecast that in 2027-28 the Scottish Government will spend slightly more on health per person than the UK Government in England.[40]

3.69 Once current policy is reflected in our baseline spending estimate and we begin to project based on population projections, it is how the age and gender structure of the population in Scotland will change relative to England that drives a faster increase in health spending per person.

[40] Scottish Government (2022) Resource Spending Review 2022 (link), HM Treasury (2021) Autumn Budget and Spending Review 2021 (link).

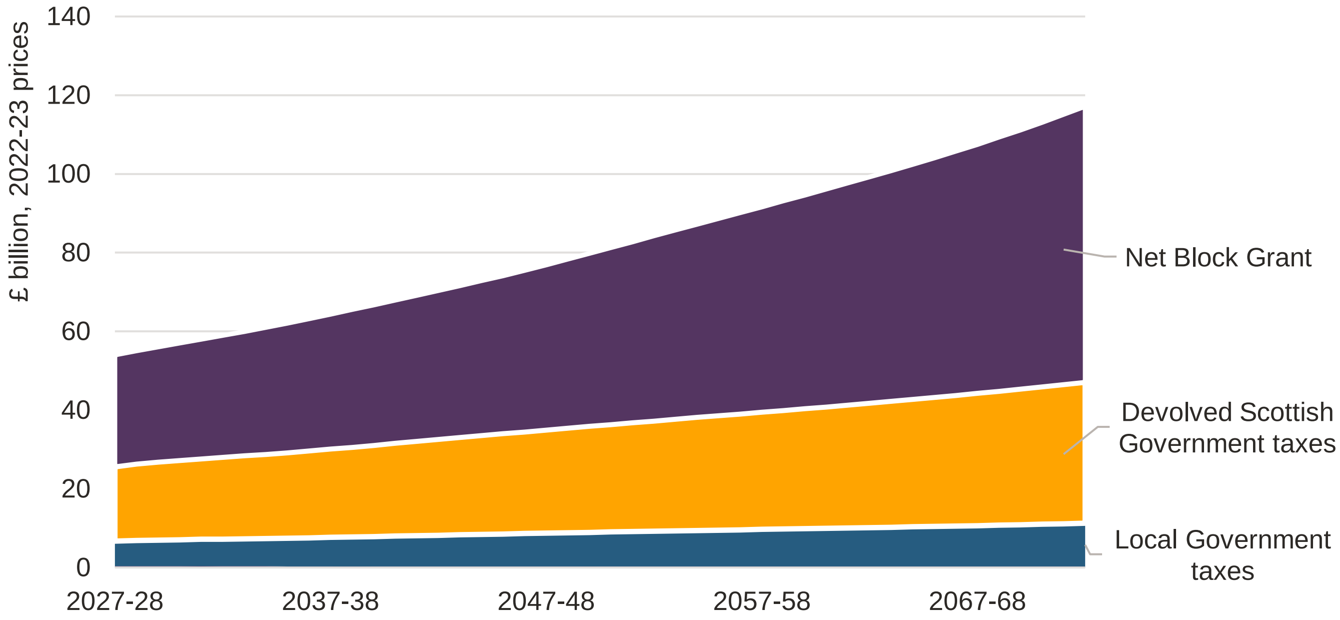
Chapter 4
Funding projections

Overview

4.1 Devolved Scottish funding consists of the Block Grant, Scottish Government tax revenues, local authority revenues, borrowing, and other relatively small sources of funding.[41] Total funding is projected to grow in real terms over the horizon from £54 billion in 2027-28 to £114 billion in 2072-73.

4.2 Figure 4.1 summarises our projection of devolved funding in Scotland. All components grow in real terms over the projection period. The Block Grant after adjustments for devolved taxes and social security – the net Block Grant – grows by the greatest amount and more quickly than other areas of funding.[42]

Figure 4.1: Projected devolved funding in Scotland



Source: Scottish Fiscal Commission
There is other funding worth an average of £0.3 billion in all years. This is not shown in Figure 4.1.

[41] Some of these sources are Scottish, such as funding from the Scottish Crown Estate, and some come from the UK Government, such as the Scottish share of the Migrant Surcharge. More information can be found on Scottish Fiscal Commission (2021) Funding for the Scottish Budget – May 2021 (link).

[42] We show the Block Grant after the adjustments for devolved tax Block Grant Adjustments (BGAs). This differs from our presentation in Scotland's Economic and Fiscal Forecasts, where we subtract the BGAs from Scottish tax revenues to show the tax net position, subtract social security spending from social security BGAs to show the net social security position, and show the Block Grant before any BGAs are applied.

Block Grant

Overview

4.3 The Block Grant is funding the Scottish Government receives each year from the UK Government. It changes in line with UK Government spending decisions in devolved areas such as health, education and transport.[43] As the UK Government changes spending the Block Grant is updated accordingly – these updates are known as Barnett consequentials.

4.4 For example, an increase in UK Government spending on health in England would lead to an increase in the Block Grant. Despite partial tax and social security devolution, Figure 4.1 shows that it remains the largest component of Scottish Government funding in our projections. Figure 4.2 shows how Barnett consequentials are calculated for the Scottish Government.

Figure 4.2: Barnett consequential calculation

Source: Scottish Fiscal Commission, HM Treasury (2021) – Statement of Funding Policy: Funding the Scottish Government, Welsh Government and Northern Ireland Executive (link).
[1] Relevant UK population refers to either England or England and Wales, depending on the particular area of devolved spending.

4.5 We have projected the Block Grant for Scotland using the same methodology used by the OBR to project spending for the whole of the UK in their July 2022 Fiscal risks and sustainability report.[44] This means we have matched many of the OBR's assumptions on economic determinants, such as productivity.

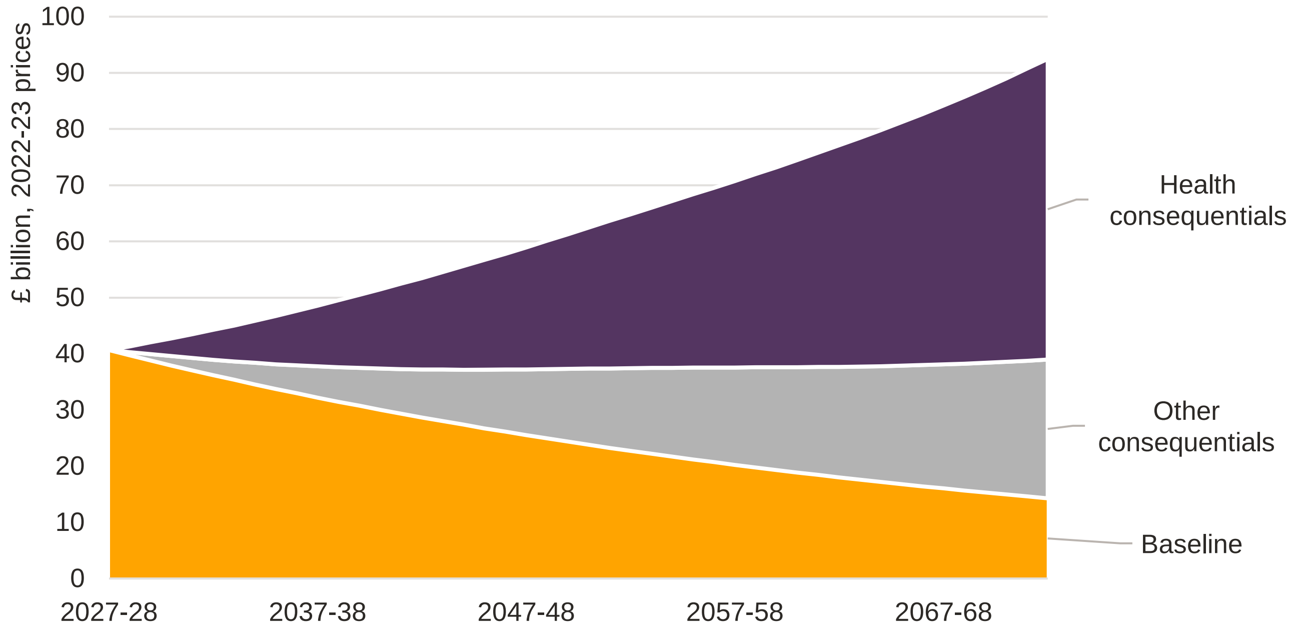
4.6 Our central projection of the Block Grant does not account for any UK Government policy changes to address fiscal sustainability. In its July 2022 report the OBR expects UK public sector debt to reach 267 per cent of GDP by 2071-72, assuming the UK Government does not act to address the increasing fiscal gap. The OBR notes that this would put the UK public finances on an unsustainable path. We discuss the effect of the interlinkages between the Scottish Government and UK Government on fiscal sustainability in **Chapter 5**.

Block Grant Projection

4.7 Based on our projection of UK Government spending, the Block Grant will more than double in real terms by the end of the projection. Figure 4.3 shows how the growth would be explained by the UK Government accommodating the long-term health pressures in England. Extra health spending by the UK Government would account for around 58 per cent of the value of the Block Grant by 2072-73, with additional spending on all other areas making up 27 per cent.

[43] A full list of devolved spending can be found in HM Treasury 2021 Statement of funding policy. HM Treasury (2021) Autumn Budget and Spending Review 2021: documents (link).
[44] Office for Budget Responsibility (2022) Fiscal risks and sustainability report – July 2022 (link)

Figure 4.3: Scottish Block Grant by area of UK Government spending



Source: Scottish Fiscal Commission

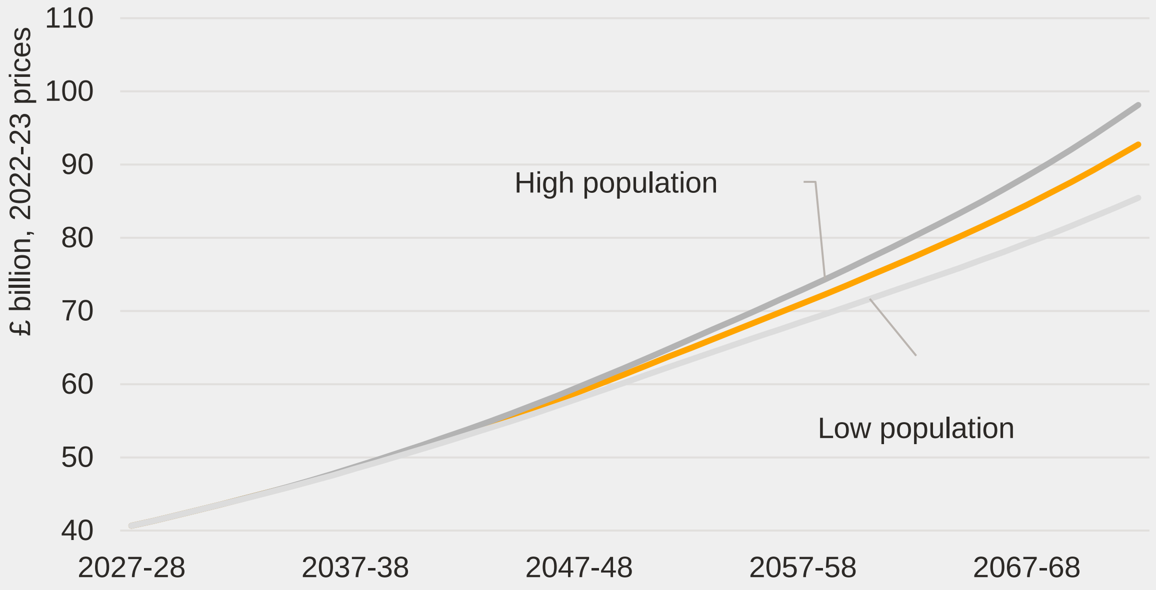
The baseline is total Block Grant funding estimated for 2027-28. It is consistent with the funding position for that year as per the Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link). Because of assumed inflation throughout the projection, its real terms value decreases over time.

Box 4.1: Sensitivity of the Block Grant projections to population assumptions

We show how Barnett consequentials are calculated in Figure 4.2. Because the funding that the Scottish Government receives is determined by the Scottish share of the relevant rest of the UK population.

If the Scottish population were to follow the high or low population variants, the Block Grant would become greater and smaller over time in each scenario, as shown in Figure 4.4.

Figure 4.4: Block Grant by population projection



Source: Scottish Fiscal Commission

This is because it is updated with a change of planned UK Government devolved spending per person: if Scotland's population relative to that of England or England and Wales is larger, so is its share of funding coming from that additional spending by the UK Government.

However, the Block Grant grows slowly, as the increasing share of Scotland's population is only applied to the additional spending, not to the whole baseline.

Figure 4.4 shows Block Grant funding before accounting for Block Grant Adjustments (BGAs). The BGAs are determined by tax revenues per person in England and Northern Ireland, multiplied by the population of Scotland. The BGAs would offset the higher Block Grant funding available through increased Barnett consequentials.

Block Grant Adjustments

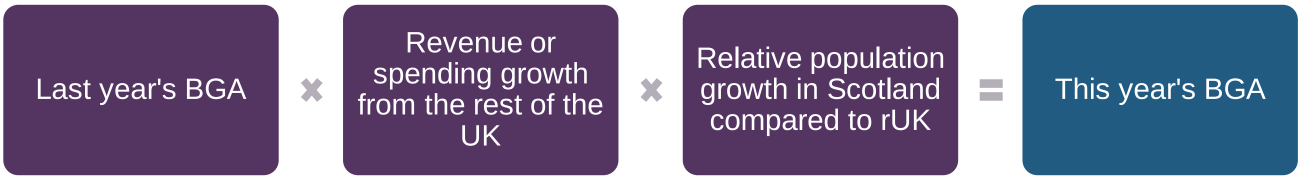
4.8 The Block Grant is adjusted to account for the funding from devolved tax revenues and spending on devolved social security that is now foregone by the UK Government. Changes to the Block Grant funding are known as Block Grant Adjustments (BGAs). BGAs are calculated using the Indexed per Capita (IPC) method.[45]

4.44 BGAs are calculated separately for each devolved tax and social security benefit. As a result of differences in devolution of taxes and social security across the different nation of the UK different

[45] More information on how BGAs are calculated can be found in our paper, Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link).

geographies are used in the IPC calculation. Tax BGA calculations use revenue growth and population in England and Northern Ireland (E&NI) and social security BGA calculations use spending growth and population in England and Wales (E&W).

Figure 4.5: Indexed per Capita method for Block Grant Adjustments



Source: Scottish Fiscal Commission

Social security BGAs

4.9 We have projected the relevant social security caseloads in England and Wales (E&W) based on projections for the child, working age, and State Pension age populations for E&W. We have also uprated average payments based on our productivity growth assumptions. This ensures the value of social security payments does not decrease relative to living standards. This is consistent with the way we have projected Scottish social security spending. These projections of social security spending in E&W are used to calculate the social security BGAs using the IPC method illustrated in Figure 4.5.

Tax BGAs

4.10 Tax BGAs reduce the Scottish Government Block Grant, to account for the additional revenue the Scottish Government raises from devolved taxes. Tax BGAs grow in line with tax revenue per person in rUK (rest of the UK) and can be thought of as an estimate of revenues raised in Scotland if tax had not been devolved. This means that a higher tax BGA leads to a larger reduction in the Scottish Government Block Grant.

4.11 We project the BGAs for each devolved tax, in line with the OBR's projections of UK tax revenues. We match the OBR assumptions on economic determinants and tax policies.[46] We use these projections of UK-wide tax revenue to estimate how tax revenue in England and Northern Ireland (E&NI) will grow, which we then use to project growth in the tax BGA.

4.12 Only if the population of both Scotland and E&NI change at the same rate will the BGA change exactly in line with tax revenues in those regions. In our population projections Scotland's population growth is slower than population growth in E&NI so tax BGA grows more slowly, which leads to a better funding position for the Scottish Government. The adjustment for relative population growth is what leads to the projected improvement in the tax net positions for the Scottish Government.

Devolved taxes

Tax revenues

4.13 We project income tax revenues based on our demographic projections, as set out in Chapter 2. We assume in our central scenario that Scottish average earnings from 2028-29 onwards will grow

[46] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).

at the same rate as in England and Northern Ireland (E&NI). We also match the OBR's assumption that real average earnings grow in line with productivity.

4.14 In line with the OBR, we assume that all tax thresholds grow in line with average earnings from 2028-29 onwards. This means there is no fiscal drag in our projection, so that the number of tax payers in each band is only affected by changes in demographics. Otherwise we would overestimate income tax revenues based on implicit tax policy assumptions.

4.15 The Survey of Personal Incomes data we use shows that non-savings, non-dividend (NSND) income tax paid tends to rise for individuals as they age until retirement, as people move through their careers. We make the simplifying assumption that this NSND income tax age profile remains constant across the projection in both Scotland and E&NI. This matches the OBR's modelling for UK-wide income tax revenues and keeps Scotland's tax net position consistent with UK Government tax revenues.

4.16 We assume that total revenues for other taxes will grow in line with GDP, reflecting broad trends in Scotland's economy. We provide more detail on specific assumptions and methodology in **Annex A**.

Tax net positions

4.17 Figure 4.6 shows our projection of the net positions of each devolved tax – revenues to the Scottish Government minus the tax BGA. In our medium-term forecasts in December 2022, we forecast the income tax net position in 2027-28 would be £1.2 billion in 2022-23 prices. We project that this will rise to £3.0 billion by 2067-68.[47]

Figure 4.6: Projections of devolved tax net positions

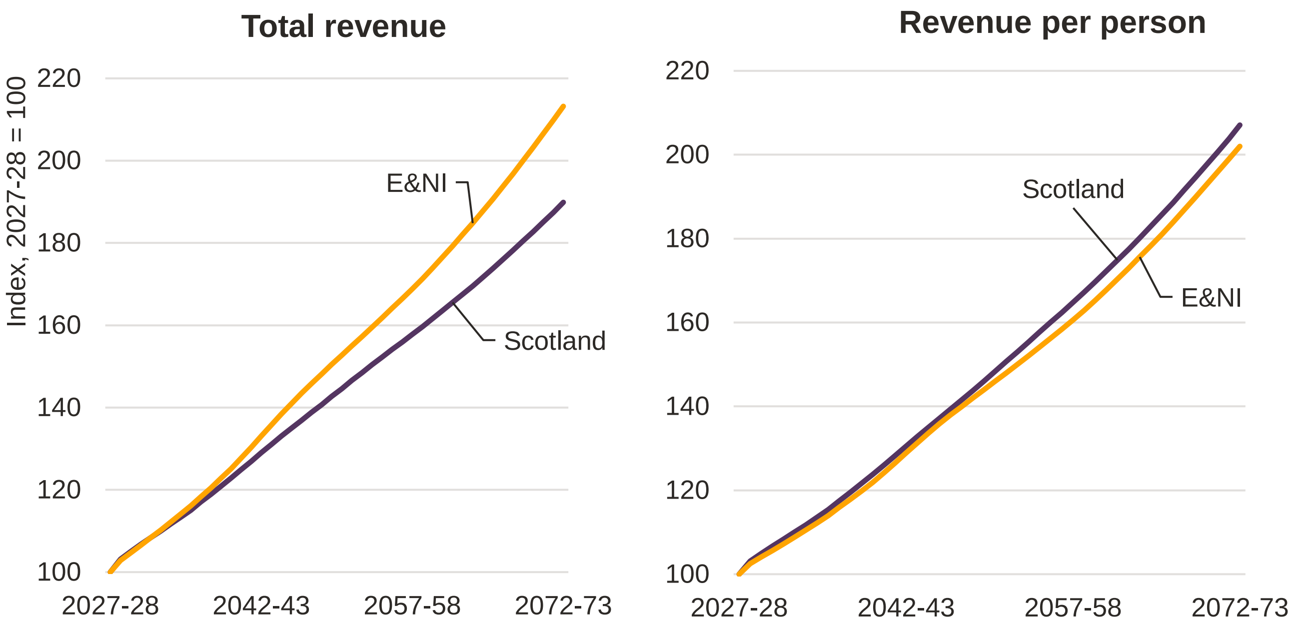
£ billion, 2022-23 prices	2027-28	2037-38	2047-48	2057-58	2067-68
Income tax	1.2	1.8	2.0	2.6	3.0
of which: revenues	17.9	21.4	25.0	28.4	32.1
of which: BGAs	-16.7	-19.6	-23.0	-25.8	-29.2
Land and Buildings Transaction Tax	0.2	0.2	0.2	0.2	0.2
of which: revenues	0.9	1.1	1.2	1.4	1.5
of which: BGAs	-0.8	-0.9	-1.0	-1.1	-1.3
Scottish Landfill Tax	-0.1	-0.1	-0.1	-0.1	-0.1
of which: revenues	0.0	0.0	0.0	0.0	0.0
of which: BGAs	-0.1	-0.1	-0.1	-0.1	-0.1
Total tax net position	1.3	1.9	2.1	2.7	3.1

Source: Scottish Fiscal Commission
Figures may not sum because of rounding.

4.18 We project that total NSND income tax revenues in E&NI will grow faster than those in Scotland, because population growth in E&NI leads to greater growth in total tax revenues. However, it is tax revenues per person in E&NI that is relevant for the BGAs under the IPC method. Tax revenues per person grow more quickly in Scotland than in E&NI, because of the falling Scottish population. Figure 4.7 shows total tax and tax per person growth in Scotland and E&NI.

[47] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).

Figure 4.7: Real non-savings, non-dividend income tax total revenues and revenues per person in Scotland and England and Northern Ireland (E&NI)



Source: Scottish Fiscal Commission

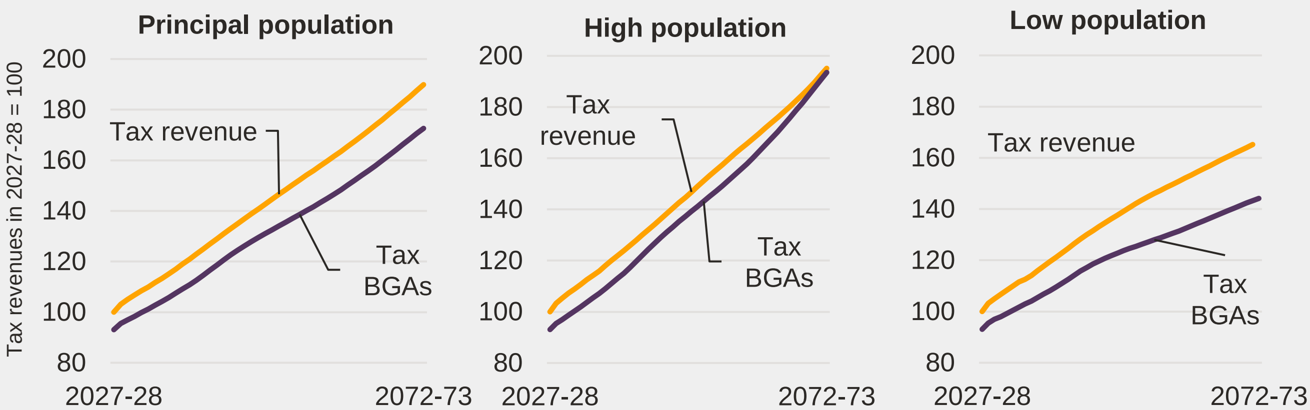
4.19 Without the population adjustment of the IPC method, the tax BGAs would grow more quickly than Scottish tax revenues. Over time the positive tax net position would decline, and eventually turn negative. Figure 2.2 shows how the Scottish population is expected to decline relative to the rest of UK for all age groups.

4.20 Box 4.2 shows how tax revenue and tax BGAs would change under the high and low population variants.

Box 4.2: Sensitivity of the tax net position projections to population assumptions

Like the Block Grant, tax net positions are sensitive to different population trends. The characteristics of the IPC method used to calculate BGAs mean that tax BGAs are more sensitive to demographic change than Scottish tax revenues are to the same demographic change This leads to seemingly counterintuitive results depending on differences in the population of Scotland, shown in Figure 4.8.

Figure 4.8: Tax revenues and Block Grant Adjustments under different population variants



Source: Scottish Fiscal Commission

The index used is relative to tax revenues in 2027-28. The Tax BGAs line starts at 93 in 2027-28, to show the positive tax net position in that year.

With the high population variant for Scotland, the tax net position would be less positive than in the principal projection. Scottish tax revenues would grow by an additional 5 per cent by 2072-73, mainly because of the larger pool of Scottish tax payers. But the BGAs would increase four times as rapidly due to the impact of greater population growth in Scotland relative to E&NI.

In contrast, with the low population variant and fewer people in Scotland the tax net position would be more positive than in the central case. Scottish tax revenues would fall by around 12 per cent by the end of the projection as the pool of tax payers gets smaller.

However, demographic ageing would lead to older tax payers, and since we assume the age distribution of income tax revenues remains constant, an older tax payer base would partially offset the fall in tax revenues because of the shrinking employed population. The declining number of people aged below 16 means that tax payers will make up a larger proportion of the Scottish population.

At the same time, the BGAs would grow more slowly, because the slower population growth in Scotland relative to E&NI leads to slower growth in the BGA.

Chapter 5
Fiscal Sustainability

Overview

5.1 In Chapter 2 we outlined Scotland's demographic projections, and how they would affect GDP growth. In Chapter 3 we explained that the Scottish Government will experience long-term spending pressures like governments in many other countries with developed economies, with its spending projected to increase by 123 per cent in real terms by 2072-73. In Chapter 4 we projected that funding would grow by 112 per cent by 2072-73, largely driven by increases in UK Government spending feeding through to the Block Grant. In this chapter, we bring together projected funding and spending, and explain what that means for the Scottish Government's fiscal sustainability.

5.2 The Scottish Government's fiscal sustainability needs to be considered within the context of UK fiscal sustainability. Future UK and Scottish governments face similar long-term challenges because of the spending pressures from population ageing and rising costs. These challenges being addressed in the rest of the UK through increased spending would lead to an increase in Block Grant funding for the Scottish Government.

5.3 However, this Block Grant funding means that the Scottish Government will face risks from differences between Scotland and the rest of the UK. Should demographic pressures be stronger than in England, or should current Scottish policy be to spend more per person in areas that are strongly linked to age (such as health), these will lead to greater marginal fiscal risks for the Scottish Government. There is also a risk for the Scottish Government if growth in devolved tax revenues is weaker than growth in tax revenue in England and Northern Ireland.

5.4 The Scottish Government cannot borrow beyond the limits set out in the fiscal framework and is required to have a largely balanced budget so adjustments are required as soon as a budget gap appears. We discuss Scottish Government borrowing in Box 5.1. These balanced budget requirements for the Scottish Government mean we present our analysis of fiscal sustainability in a slightly different way to most FSRs, but do not change our fundamental results. The Scottish Government would still have to face the effects of an ageing population even if it could borrow more, as the UK and other governments face similar risks despite the ability to borrow.

5.5 The Scottish Government must respond to any fiscal sustainability pressures in each year. Within this, it faces pressures both from specific factors in Scotland, and shared pressures across the UK. For example, the Scottish Government may face increased pressure to spend because of new social security policies introduced since the devolution of some areas of social security.[48]

5.6 At the same time, the population in Scotland will also share UK-wide pressures. As the UK Government responds to its long-term challenges, the effect will also be sustained by people in Scotland. For example, rises in reserved taxes will affect people who live in Scotland. We focus on

[48] HM Treasury (2016) The agreement between the Scottish government and the United Kingdom government on the Scottish government's fiscal framework (link).

pressures on Scottish Government funding, but responses to UK fiscal unsustainability will affect more than just Scottish Government finances.

Box 5.1: Scottish Government borrowing and the Scotland Reserve

The Scottish Government has limited ability to borrow or transfer funds between financial years.[49] Limits to borrowing and use of the Scotland Reserve are fixed in nominal terms, and so their value will reduce with inflation throughout the projection period.

Capital borrowing is capped at £3 billion, with a maximum of £450 million that can be borrowed in each financial year. It is currently the Scottish Government's plan to borrow £250 million in each year. Based on this, the Scottish Government will not reach the borrowing limit in any year of the projection. However, as the limit is fixed in nominal terms borrowing as a share of capital budgets will fall over time. Borrowing would be 5 per cent of capital budgets in 2027-28 and is projected to fall to 3 per cent in 2072-73.

For resource spending, the Scottish Government can only borrow to manage forecast error, with a limit of £300 million in each year, unless a Scotland Specific Economic Shock (SSES) is forecast.[50] In January 2021, we found that negative forecast errors beyond this limit are likely to take place in three of every 10 years.[51] As the scale of tax revenues increases, we expect that reconciliations larger than the resource borrowing limit of £300 million will become increasingly common.

The Scotland Reserve allows Scottish Government saving in one year to be spent in the future, which can be used to move funding between financial years. The overall limit to the reserve is £700 million. Within each year, a maximum of £250 million can be drawn down for resource spending, and £100 million for capital and financial transactions.[52] As with borrowing, given that its size is fixed in cash terms, the Reserve's ability to make an impact will reduce over time. We project that it would fall from 1.5 per cent of the overall budget in 2027-28 to 0.7 per cent in 2072-73. At the same time, the size of unexpected underspends that must be managed through the reserve will grow in line with the projected increase in the scale of the budgets.

The Annual Budget Gap

5.7 We measure Scottish Government sustainability using the Annual Budget Gap (ABG). It shows the extent to which cumulative spending cuts or tax rises would be required each year in order to balance the budget.

5.8 Figure 5.1 shows our projection of the Scottish Government's ABG, before accounting for action from future UK Governments to address fiscal sustainability. In the fiscal framework, the Scottish Government has more control over its spending than its funding. The Scottish Government is also required to run a broadly balanced budget. Therefore, we show the ABG as a share of Scotland's

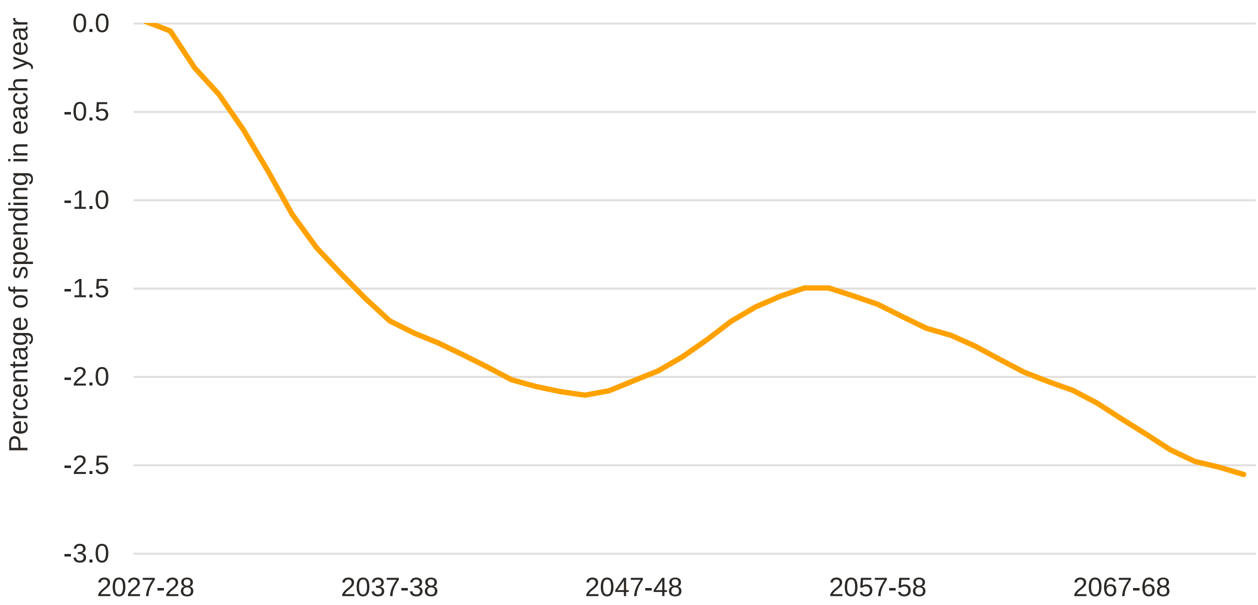
[49] HM Treasury (2016) The agreement between the Scottish government and the United Kingdom government on the Scottish government's fiscal framework (link).
[50] A SSES allows resource borrowing up to £600 million. We do not project a SSES in the 50-year horizon. For more information about how a SSES is determined, see HM Treasury (2016) The agreement between the Scottish government and the United Kingdom government on the Scottish government's fiscal framework (link).
[51] Scottish Fiscal Commission (2021) Scotland's Economic and Fiscal Forecasts – January 2021 (link).
[52] These limits are waived in an event of a Scotland Specific Economic Shock (SSES).

spending in each year of the projection. This illustrates the scale of spending cuts that would need to be made in devolved areas in each year to meet the requirements of the fiscal framework.

5.9 Figure 5.1 shows that under current Scottish and UK fiscal policies, if public services in Scotland are to continue to be delivered as they are today, Scottish Government spending over the next 50 years will exceed the estimated funding available by an average of 1.7 per cent each year.

5.10 This is equivalent to £1.5 billion in today's prices. This represents approximately 4 per cent of average Scottish Government spending on health in each year, or 6 per cent of average devolved income tax revenues. To address this the Scottish Government would have to consistently reduce spending or raise devolved taxes throughout the next 50 years.

Figure 5.1: Scotland's projected Annual Budget Gap



Source: Scottish Fiscal Commission

5.11 Part of the ABG is driven by the increasing differential between Scotland and England in health spend per person, as illustrated in Figure 3.11. Although we project in **Chapter 4** that most of the increase in Block Grant funding will come from additional health spend by the UK Government, the per person amount that will come to the Scottish Budget will be less than the per person amount the Scottish Government is projected to spend. Although the differential in Figure 3.11 is small, its impact on the ABG is substantial, because health makes up over a third of the Scottish Government's expenditure.[53]

5.12 As shown in Figure 5.1, adjustments required to achieve sustainability could be considered to be relatively small if the UK Government makes no policy changes to address its own fiscal sustainability. However, given the similar long-term challenges faced by both the Scottish and the UK Governments, the Scottish Government's sustainability must be considered in the context of sustainability for the whole of the UK.

5.13 Our projection is based on an OBR scenario in which the UK Government funds its gap through borrowing without taking corrective action. The OBR noted that this approach would not be sustainable. Future UK Governments would need to address this through either raising more tax revenue or reducing spending to stop public debt taking an unsustainable path.

[53] Scottish Government (2022) – 2023-24 Scottish Budget (link).

5.14 The effect on the ABG depends on what balance future UK Governments strike between reducing spending and raising taxes, and to what extent these are in devolved or reserved areas. Since more spending areas than taxes are currently devolved, the Scottish Government funding is more sensitive to UK Government spending cuts. The Scottish Government's funding would be relatively protected from fiscal pressure if UK Government policy decisions focussed on reserved areas.

UK Government fiscal sustainability

5.14 We have explained how, given the current fiscal framework, demographic change poses a risk to the sustainability of the Scottish Government's Budget only to the extent that demographic cost pressures exceed those in the rest of the UK. The bulk of the sustainability risk is with the UK Government. At the same time, the fiscal framework means that any UK Government action to address its share of the problem would influence the Scottish Government's sustainability, either through the Block Grant or through the Block Grant Adjustments (BGAs) for devolved taxes and social security.

5.15 In July 2022 the OBR projected the UK Government finances assuming that it did not take action to address the increasing fiscal gap in their projections. In this scenario, the UK Government would have a deficit in its primary balance for almost all years of the projection. The deficit would gradually grow, reaching 11 per cent of GDP by 2071-72. The OBR concluded that this is an unsustainable fiscal position over the long term, with public sector net debt reaching 267 per cent of GDP in 2071-72.[54]

5.16 In its pre-pandemic March 2020 Economic and Fiscal Outlook, the OBR forecast that UK public sector net debt would be 75 per cent of GDP in 2025-26, the final year of their forecast.[55] The OBR used this as an illustrative target for UK public sector net debt in its July 2022 Fiscal risks and sustainability report.[56]

5.17 The OBR finds that a realistic path to reach debt of 75 per cent of GDP would require the UK Government to adjust its primary balance by a cumulative 1.5 per cent of GDP each decade of the 50-year horizon, through either raising more tax revenue or reducing spending. We assume that these adjustments are applied evenly across each year of the decade to smooth the reduction in the UK Government's projected deficit across the projection period.

5.18 The OBR cannot use its illustrative response to advise the UK Government on whether it should achieve fiscal sustainability by reducing spending, raising more tax revenue, or a combination of both. As part of our fiscal sustainability report we make assumptions around the UK Government's policy response, to show how this would affect the Scottish Government's funding.

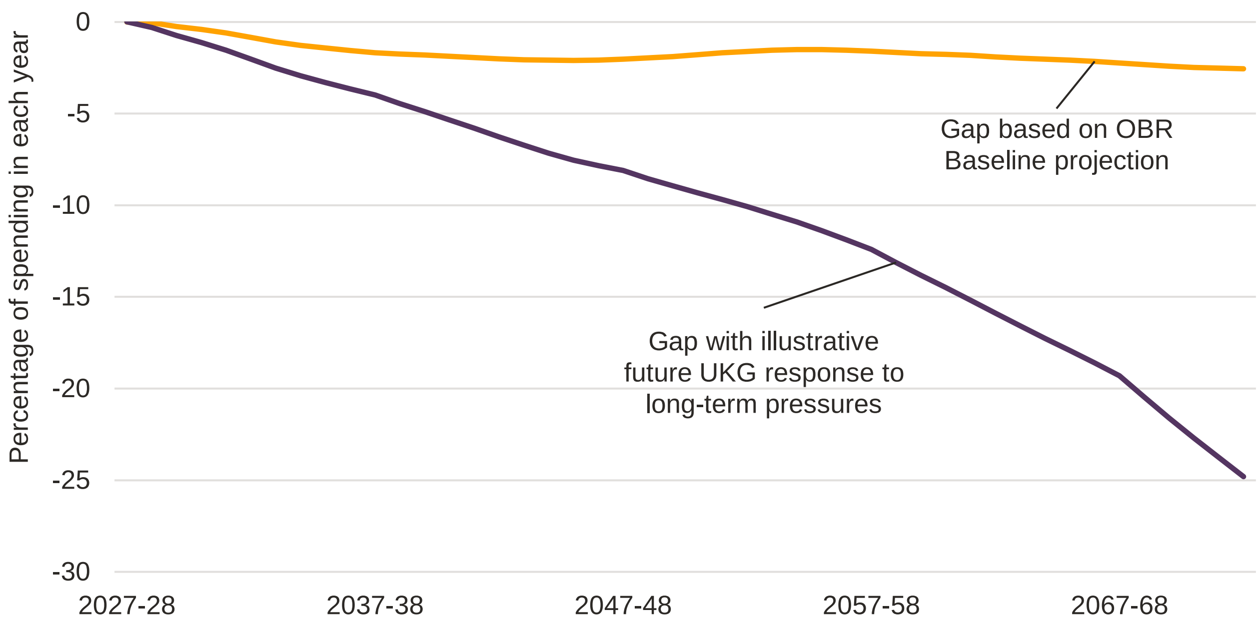
5.19 In our illustrative scenario, we assume that the UK Government closes the gap by raising more tax revenue and reducing spending in equal proportions. We further assume that both spending cuts and tax rises take place irrespective of whether they are devolved or reserved, in line with each tax revenue or department's spending as a share of the total UK Government activity. We assume that the Scottish Government does not introduce any reduction in spending or tax rises in response to these policies so that we can measure the resulting ABG.

[54] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).
[55] Office for Budget Responsibility (2020) Economic and Fiscal Outlook – March 2020 (link).
[56] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).

5.20 Figure 5.2 shows that under these assumptions, future UK Governments' response to fiscal sustainability increases the Scottish ABG, from an average of 1.7 per cent of spending each year to an average of 10.1 per cent each year. This equates to around £10 billion in 2023-24 prices. This gap is equivalent to 26 per cent of the average Scottish Government spending on health in each year, or 38 per cent of average devolved income tax revenues.

5.21 The line showing the gap with illustrative future UK Government responses gets steeper throughout the projection period, as the UK Government increases its action in each decade of the projection period.

Figure 5.2: Scottish Government's projected Annual Budget Gap with UK Government response to long-term pressures



Source: Scottish Fiscal Commission

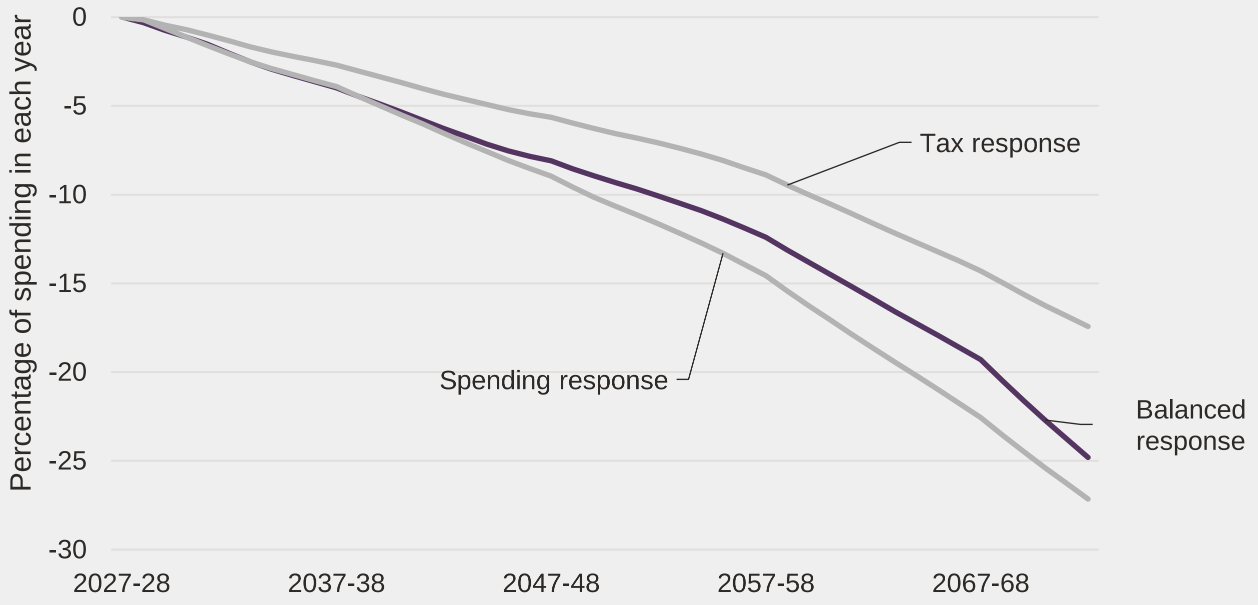
5.22 The gap in the illustrative UK Government response is highly uncertain in scale and direction. Box 5.2 shows the gap could be smaller if the UK Government generally favoured tax rises to reducing spending, since more spending than taxation is devolved. The gap would also be smaller if the UK Government focussed on reducing spending and tax rises in reserved areas. Either scenario would make our projection closer to the OBR baseline scenario. In contrast, if the UK Government chose to address the gap by targeting devolved spending and taxation in the rest of the UK, the effect on the Block Grant and BGAs would lead to a larger gap.

Box 5.2: Sensitivity of the Annual Budget Gap to UK Government policy

Figure 5.3 illustrates the difference between the outlined UK Government response, and scenarios where the response is entirely based on either reducing spending or tax rises. The spending response is a scenario where all UK Government fiscal tightening is based on reducing spending by 1.5 per cent of UK GDP each decade. Similarly, the tax response is where the UK Government raises tax revenue by 1.5 per cent of UK GDP each decade.

The funding position is more sensitive to spending reductions than to tax rises because the net Block Grant provides two thirds of Scottish Government funding.

Figure 5.3: Scotland's Annual Budget Gap under different UK Government policy responses



Source: Scottish Fiscal Commission

The scenarios in Figure 5.3 are still uncertain. They assume that reducing spending or tax rises by the UK Government are made equally to devolved or reserved areas. If all were made in reserved areas, although the people in Scotland would experience them, Scottish Government funding would not be affected.

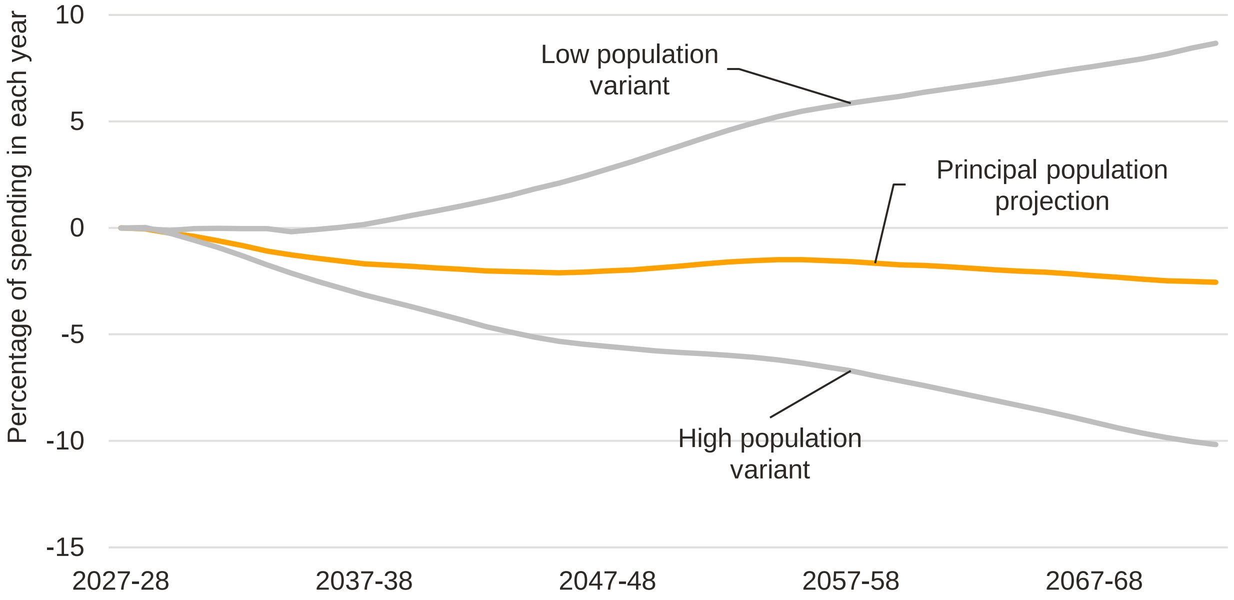
In contrast, if spending cuts or tax rises were in devolved areas, the impact on Scottish Government funding would be substantially larger than what the alternative scenarios depict in Figure 5.3.

Effect of population variants

5.15 The Scottish Government's long-term fiscal position is also sensitive to changes in its population. This section of the report shows how population variants could affect fiscal sustainability. **Chapter 2** and **Annex A** provide more detail on the variants.

5.16 Figure 5.4 shows how a different population in Scotland would affect the Scottish Government's fiscal sustainability. Having fewer people in Scotland relative to the rest of the UK would lead to a surplus of almost 9 per cent of public spending in 2072-73, while more people would increase the ABG to slightly more than 10 per cent of spending.

Figure 5.4: Scotland's Annual Budget Gap under different population assumptions



Source: Scottish Fiscal Commission

5.17 Figure 5.5 sets out how Scotland's population affects three main areas of the Scottish Government's fiscal sustainability: spending, tax funding, and Block Grant funding.

Figure 5.5: Population variant effects on Scottish Government funding

Scenario	Block Grant	Tax net position	Spending	Total effect
Low population	**Slightly lower**, as Scotland has a smaller population share in the Barnett formula	**Substantially higher**, as Scotland has smaller BGAs which offset reduced tax revenues	**Substantially lower**, as the lower population reduces spending on health and education	Increased funding and reduced spending leads to reduced ABG
High population	**Slightly higher**, as Scotland has a higher population share in the Barnett formula	**Substantially lower**, as Scotland has larger BGAs which offset increased tax revenues	**Substantially higher**, as the higher population increases spending on health and education	Reduced funding and increased spending leads to increased ABG

Source: Scottish Fiscal Commission

5.18 Having smaller population means slower Scottish economic growth and a shrinking labour force, which leads to less devolved tax revenue. At the same time, tax BGAs grow more slowly because of the Indexed per Capita method currently used to calculate the BGAs.[57] The slower growth in the BGAs completely offsets the fall in tax revenues, improving the tax net position. Finally, having fewer

[57] We explain the Indexed per Capita (IPC) method and its effects on our projections of devolved tax net positions in Chapter 4.

people also means lower spending on public services as there is less demand for services such as health and education.

5.19 In contrast, the higher population variant leads to faster GDP growth, greater labour supply and more devolved tax revenue, but substantially more pressure on Scottish Government spending. The higher population similarly leads to a less positive tax net position, as the tax BGAs will be larger because of the higher Scottish population.[58]

5.20 In this analysis, we focus on how population growth in Scotland would affect devolved public finances. Having a smaller or larger population will have much wider impacts than just its effect on public finances. Although our analysis shows the effects of the population change on Scottish Government finances, we recognise this is a narrow lens through which to view the effects of a falling population, for which there are broader societal implications.

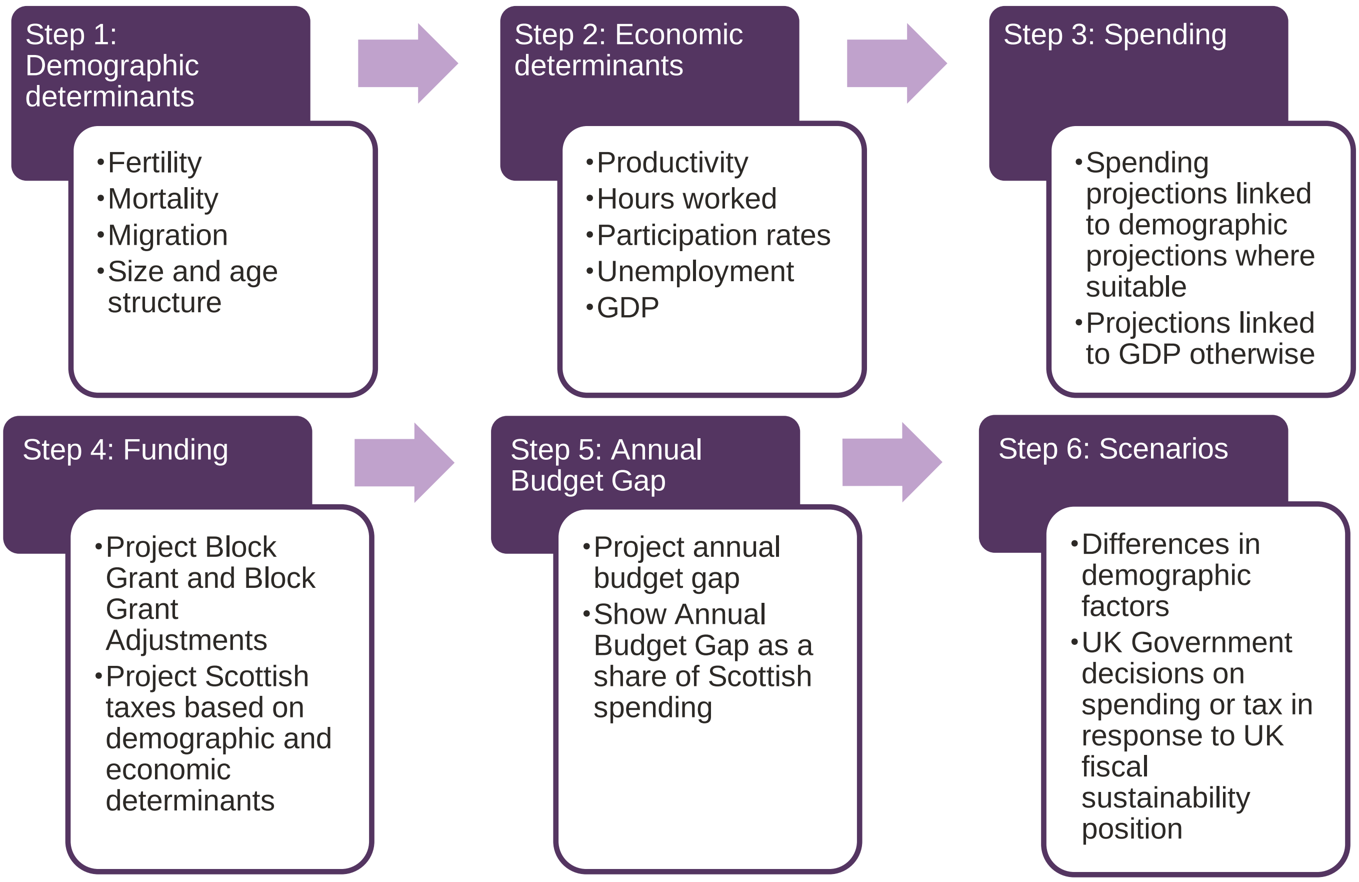
[58] Note that such increases in life expectancy may correspond with higher participation rates in the economy if medical conditions are resolved. This mitigating effect is not incorporated in our modelling.

Annex A
Methodology and assumptions

Overview

A.1 We set out our planned modelling approaches in our Approach to Fiscal Sustainability – Consultation Paper in August 2022.[59] We then consulted with stakeholders across the public sector and researchers, to further develop and refine these approaches. We summarise our current approach in Figure A.1.

Figure A.1: Methodological approach for assessing Scottish Government fiscal sustainability



Source: Scottish Fiscal Commission

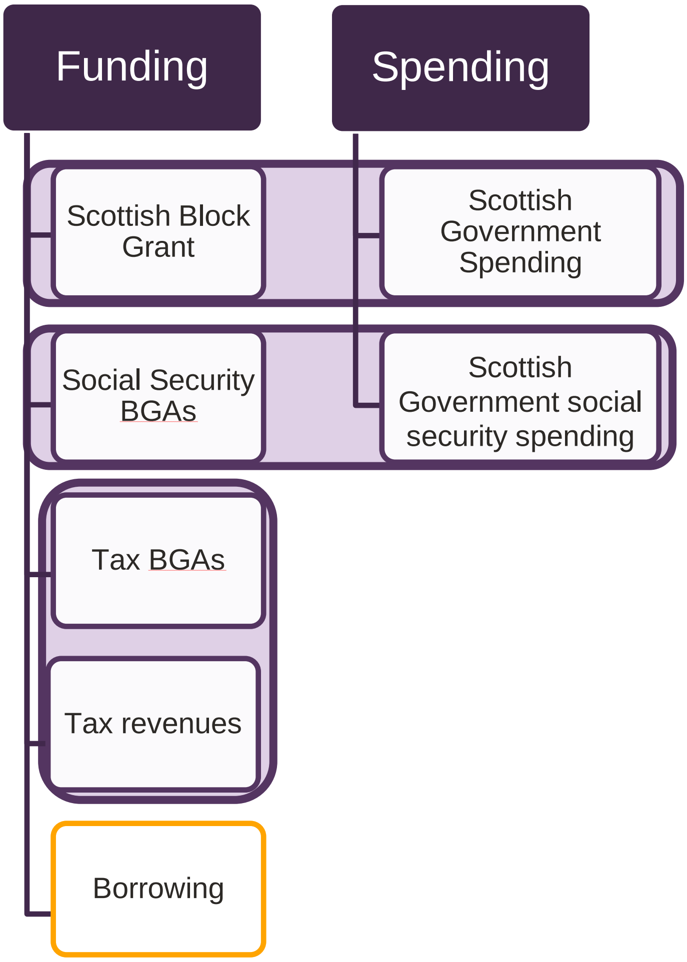
A.2 To effectively project Scottish Government fiscal sustainability, since its funding depends to a great extent on spending of the UK Government, we must make sure that our approach to each area of funding and spending is consistent. This is so that we do not create an overly positive or negative budget position or tax or social security net positions simply due to modelling inconsistencies.

A.3 Figure A.2 shows the main components of our funding and spending projections for the Scottish Government. For areas linked together in the purple boxes, we make sure to use consistent assumptions and methodologies.

[59] Scottish Fiscal Commission (2022) Approach to Fiscal Sustainability – Consultation Paper (link).

A.4 For example, if we make different assumptions around growth in tax revenues and the tax Block Grant Adjustments (BGAs), this could create an overly positive or negative tax net position simply on the basis of modelling inconsistencies. To accurately project funding and spending to assess fiscal sustainability, we need to ensure that our approach is consistent in each area.

Figure A.2: Components of Scottish Government fiscal sustainability



Source: Scottish Fiscal Commission

A.5 In this annex we set out our final approach used to project the Scottish Government's Annual Budget Gap (ABG). We outline the data sources and broad modelling techniques used to produce this report. We encourage interested readers to provide feedback on the approaches set out here, to allow us to continue to develop for future fiscal sustainability work.

Population

A.6 For England, Wales and Northern Ireland, we use the 2020-based interim projections published by the ONS in January 2022.[60] Where we look at variant population assumptions, it is only the projection for Scotland that changes relative to this fixed position for the rest of the UK.

A.7 We have produced our own projection for the Scottish population, using a tool provided by the Office for National Statistics.[61] We use the same long-term assumptions on birth rates, mortality and migration as in the 2020-based ONS projections, but starting from the same short-term population

[60] Office for National Statistics (2022) 2020-based interim national population projections (link).

[61] Note that while the tool was provided by the ONS, the outputs are not themselves National Statistics, and are not endorsed by ONS.

as our December 2022 forecast, which is aligned to the mid-2021 population estimate published by the NRS, and takes account of data and events since 2020.[62]

A.8 The main difference from the ONS projection is that we assume higher international migration over 2021-22 and 2022-23 in light of recent data and the large number of arrivals from Ukraine. We also assume a higher birth rate for 2021-22 and more deaths in 2021-22 and 2022-23, based on recent data. These adjustments give a Scottish population that is consistent with December 2022 Scotland's Economic and Fiscal Forecasts and which is around 1 per cent higher than if we simply used the ONS projection.[63]

A.9 The population projections in this report are not aligned to the recent census-based estimates of the mid-2021 population in the rest of the UK, and do not use the slightly higher migration assumptions in the new projections released by the ONS in January 2023.

High and low population variants

A.10 The high and low population variants used in this report were also produced using the tool provided by the ONS. Both variants are the same as our principal projection up to 2027-28 and then use variant assumptions for Scotland for 2028-29 onwards. We are interested in the fiscal impact of different paths for the Scottish population relative to the rest of the UK, so we use do not apply the variants for England, Wales and Northern Ireland.

A.11 The 2020-based interim population projections do not include the range of variant assumptions that are usually included in a full set of population projections, so we have derived our low and high variants by mirroring how the low and high variants differed from the principal assumptions in the last full set of 2018-based population projections.

A.12 Our high and low population variant use higher and lower assumptions respectively for all three of birth rates, international migration and life expectancy.

Births

A.13 In our principal projection, the total fertility rate is assumed to be 1.3 in Scotland and 1.6 for the whole UK. In our low population projection we reduce the Scottish rate to 1.1 and in the high population variant we increase it to 1.4. Note that these differences are not symmetrical around the principal assumption, but do match the differences between the low, principal and high assumptions in the last full set of ONS projections.

Migration

A.14 In our principal projection annual net international migration to Scotland is 10,000 a year, and for the whole UK is 205,000. In our low population variant, migration to Scotland is only 5,500, and in the high variant it is 14,500. This is based simply on the roughly symmetric differences between the low, principal and high variants in the last full set of ONS projections.

A.15 The variant projections all use the same principal assumptions for the rates of cross-border migration to and from the rest of the UK.[64]

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[62] National Records of Scotland (2022) Mid-2021 Population Estimates Scotland (link).
[63] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).
[64] Note that the cross-border migration assumptions are based on per person rates of movement in both directions, so in the high population variant, net migration from the rest of the UK is slightly lower, and vice versa in the low population variant.

Deaths

A.16 Our principal projection uses the Scottish and UK mortality rates from the ONS 2020-based interim projections, in which the assumed long-term rate of annual mortality improvement is 1.2 per cent in Scotland and the rest of the UK.[65] For the low and high population variants we adjust Scotland's mortality rates in proportion to the differences between the low, principal and high life expectancy variants of the 2018-based projections.[66] This gives assumptions of no long-term improvement in Scottish mortality rates in the low population variant, and 1.9 per cent in the high population variant.

A.17 Full details of our principal and variant population projections are available in the supplementary tables published with this report.

Economy

A.18 Long-term trend GDP is the product of the population aged 16 years and older, labour force participation rate, equilibrium employment, average hours worked and labour productivity. This is illustrated in Figure A.3.

Figure A.3: Schematic representation of long-term GDP projection

Source: Scottish Fiscal Commission

A.19 Our projection relies on underlying estimates of each component of this equation. We discuss population assumptions above and set out our rationale for each of the economic determinants below.

A.20 We broadly mirror the assumptions for each of the economic determinants the Office for Budget Responsibility (OBR) uses for its UK long-term determinants in the Economic and fiscal outlook report[67]. These assumptions do not produce the same projections for Scotland as these reflect existing differences in levels of labour force participation, productivity, average hours worked, the equilibrium rate of employment and the total population.

Participation rates

A.21 Demographics primarily affect the economy through the supply of labour. The number of people in work is determined by the size of the total population, the proportion of those who are economically active and the unemployment rate.

A.22 To illustrate the effects of our demographic projections on the economy, we have combined our demographic projections with participation rates by single year of age and gender to project the size of the labour force.

[65] Office for National Statistics (2022) National population projections, mortality assumptions: 2020-based interim (link).
[66] Office for National Statistics (2019) National population projections, mortality assumptions: 2018-based (link).
[67] Office for Budget Responsibility (2022) Economic and fiscal outlook – March 2022 (link).

A.23 The participation rate is the total number of people who are currently employed or actively seeking work in relation to the total population. It is influenced by the age structure of the population, with older and younger people less likely to participate in the labour force.

A.24 The population aged 16 to 64 has typically been considered a proxy for the 'working-age' population. However, as the State Pension age (SPA) has increased and people are staying in work longer, an increasing share of those aged 65 and over are economically active. We apply an adjustment factor to our single year of age participation rates by gender to account for SPA changes.

Labour productivity

A.25 Labour productivity is the amount of goods and services produced for an hour of labour input. It is driven by technological advancement along with improvements in working practices and human and physical capital.

A.26 Over the projection period, we assume that productivity grows at the same rate as the OBR project for the UK. From 2028-29 to 2035-36 labour productivity grows by 1.4 per cent per year. In the long term, we project that productivity will grow by 1.5 per cent until the end of the projection period.

Average hours worked

A.27 We hold average hours worked per person constant over the long term, which is in line with the OBR's assumption for the UK. Currently it is 31.5 hours per week in Scotland.[68]

A.28 Unlike participation rates, we do not take into account age or gender specific average hours worked. That means that Scotland's changing age structure does not affect the projection of average hours worked.

Equilibrium rate of employment

A.29 In the long term, we assume a steady state of unemployment and use this to project the equilibrium rate of employment. For these projections we mirror the OBR's assumption of the UK unemployment rate of 4.1 per cent and hold this constant over the projection period.

Tax

A.30 Here we set out the approach used to project relevant tax revenues.

A.31 Taxes currently devolved to the Scottish Government or Scottish local authorities are:

- Non-Savings, Non-Dividend (NSND) income tax rates and bands[69]
- Non-Domestic Rates (NDR)
- Council Tax
- Land and Buildings Transaction Tax (LBTT)
- Scottish Landfill Tax (SLfT)

[68] Office for National Statistics (2023) Labour market statistics time series (link).
[69] The Scottish Government has been devolved the ability to set rates and bands for NSND income tax in Scotland. All other aspects of income tax are reserved to the UK Government.

A.32 For all Scottish taxes other than Council Tax, we produce a regular forecast at each fiscal event.[70] We have used these forecasts as the starting point for our long-term projections of Scottish Government revenues. The forecasts for income tax, NDR, LBTT and SLfT published in our December 2022 Scotland's Economic and Fiscal Forecasts are applied up to 2027-28 in this fiscal sustainability report.[71]

A.33 BGAs are based on the OBR's forecasts for England and Northern Ireland, as set out in their Devolved Taxes reports.[72] We use these as the starting point for projections of taxes in the rest of the UK. For projecting Business Rates in England, we have used the OBR's forecast of Business Rates for the UK.

A.34 For Council Tax in both Scotland and UK, we have used the OBR's November 2022 forecast of Council Tax across the UK, which they grow in line with their projected UK-wide GDP. We assume the share of Council Tax in each region of the UK will be constant over time, in line with the 2020-21 outturn data.

A.35 Here we set out specific assumptions we make to project each tax revenue. We summarise these in Figure A.4.

Figure A.4: Summary of assumptions around tax revenues for our Fiscal Sustainability Report projections

Tax	Assumptions
Income tax	• Rates and bands grow with nominal average earnings • Real average earnings grow with productivity • Labour market participation is constant for each year of age, but overall participation changes in line with population projections
Non-Domestic Rates	• NDR distributable amount to be a constant share of GDP • NDR Pool used to smooth across revaluation cycles
Council Tax	• Constant as a share of GDP
Land and Buildings Transaction Tax	• Constant as a share of GDP
Scottish Landfill Tax	• Constant as a share of GDP

Source: Scottish Fiscal Commission

[70] Our most recent forecasts were Scottish Fiscal Government (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).
[71] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).
[72] The OBR's most recent forecast of devolved taxes is Office for Budget Responsibility (2023) Devolved tax and spending forecasts – March 2023 (link).

Income tax

A.36 We set out our modelling approach for income tax in our April 2021 paper.[73] For the long-term FSR projections, we have extended this model to project over the 50-year horizon. Here, we set out any changes to the assumptions we make for our long-term projections.

A.37 We assume that real average earnings will grow in line with productivity from the final year of the five-year forecast. As set out in **Chapter 2**, we assume that productivity will grow at the same rate throughout the UK. We assume that earnings will grow at the same rate in Scotland as in the rest of the UK from 2028-29 onwards.

A.38 We assume that employment will grow in line with each UK Nation's demographics and that the rates of leaving and entering the labour market will be constant for each year of age across the projection horizon. This means that participation rates for each year of age are constant, and total employment will only be affected by changes to the population.

A.39 Taken together, these assumptions mean that it is only demographic differences that affect changes between Scottish and rUK (rest of the UK) tax revenues across the projection horizon. We assume all other economic inputs are constant, in line with our five-year forecasts.

A.40 We assume that all income tax thresholds will grow in line with average earnings from 2028-29 onwards. This contrasts with our standard assumption that thresholds in Scotland will grow in line with Consumer Price Index (CPI) inflation, while the higher and top rate thresholds are fixed in cash terms.[74]

A.41 Over the 50-year projection, having tax thresholds grow more slowly than earnings would lead to fiscal drag. This could lead to an overly positive or negative projection of Scottish Government funding, depending on Scotland's revenue bonus from fiscal drag relative to the rest of the UK.

A.42 To avoid this effect, we instead grow tax thresholds in line with earnings. This keeps the tax position constant over time, before the effect of demographics on employment. This means the share of tax payers in each band is broadly constant over time.

A.43 This assumption matches the OBR's approach, to avoid fiscal drag from benefiting tax revenues. In their July 2011 Fiscal sustainability report, the OBR finds that fiscal drag would increase tax revenues by 2 per cent of GDP between 2016-17 and 2030-31.[75] We have matched the assumption that there will be no fiscal drag through the projection.

Non-demographic taxes

A.44 We grow all taxes other than income tax in line with GDP. This assumes that they are constant as a share of GDP over the long-term, from the end of five-year forecasts out to 2072-73.

A.45 Our broad-brush assumption for these taxes is that they are not substantially affected by demographics. Instead, they are determined more by economic growth. This keeps our projections consistent with those of the economic performance of Scotland and the rest of the UK, and illustrates how differences in economic growth could affect Scotland's funding over time.

[73] Scottish Fiscal Commission (2021) How we forecast income tax – May 2021 (link).
[74] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – May 2022 (link).
[75] Office for Budget Responsibility (2011) Fiscal sustainability report – July 2011 (link).

Block Grant

A.46 We have projected the Block Grant for Scotland based on the OBR's own projection of UK-wide spending in their July 2022 Fiscal risks and sustainability report.[76] We have updated the OBR projection to use the ONS' principal migration projection.

A.47 We have then projected health, education, and social care spending in line with demographics. We use the OBR's spending profiles by age and gender, and estimate UK Government spending in England or England and Wales, as appropriate. On top of the demographic effects, we have uprated health, education and social care spending by the projected productivity growth and an 'other' additional growth rate for health.

A.48 We assume that all other spending grows in line with the OBR projections of UK-wide GDP. This assumption keeps spending constant as a share of GDP across the projection.

A.49 Our projection of the Block Grant is aligned with our December 2022 Scotland's Economic and Fiscal Forecasts until 2027-28.[77] From 2028-29 onwards, we use the Barnett formula to calculate the growth in Scottish Government funding from changes in spending by each UK Government department. We provide an illustration of the Barnett formula in Figure A.5.

Figure A.5: Barnett consequentials calculation

Source: Scottish Fiscal Commission, HM Treasury (2021) – Statement of Funding Policy: Funding the Scottish Government, Welsh Government and Northern Ireland Executive (link).
[1] Relevant UK population refers to either England or England and Wales, depending on the particular area of devolved spending.

A.50 To account for the level of devolution in each area of spending, UK Government departments are assigned a comparability factor. This is calculated as the share of the Department's total spending which is devolved to the Scottish Government. This is then applied to any in-year changes in each department's spending, to calculate the resulting Barnett consequentials for the Scottish Government.

A.51 We assume that the comparability factors are constant over the projection horizon, in line with the current comparability factors set in the 2021 Spending Review.[78] We set out the current comparability factors in Figure A.6.

[76] Office for Budget Responsibility (2022) Fiscal risks and sustainability – July 2022 (link).
[77] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).
[78] HM Treasury (2021) – Statement of Funding Policy: Funding the Scottish Government, Welsh Government and Northern Ireland Executive (link).

Figure A.6: Scottish Government Comparability Factors

UK Government department [1]	Comparability factor (per cent)
Business, Energy, and Industrial Strategy	6.8
Business rates [2]	100.0
Levelling Up, Housing and Communities: Levelling Up, Housing and Communities	100.0
Levelling Up, Housing and Communities: Local Government	100.0
Digital, Culture, Media, and Sport	68.0
Environment, Food and Rural Affairs	96.9
Education	100.0
Transport	91.7
Health and Social Care	99.5
Work and Pensions	20.1
HM Revenue and Customs	4.0
HM Treasury [3]	0.0
Home Office	74.1
Law Officers' Departments	98.3
Justice	100.0

Source: Scottish Fiscal Commission, HM Treasury (2021) – Statement of Funding Policy: Funding the Scottish Government, Welsh Government and Northern Ireland Executive (link).
[1] There are nine smaller independent bodies that we have not included here, that add £5 million to the planned Scottish Block Grant in 2022-23. These all have a comparability factor of 100 per cent and are laid out in the 2021 Statement of Funding Policy. We account for these in our projection of Scottish Government funding but exclude them here for simplicity.
[2] The Business Rates portion of the Block Grant is a reduction in funding to account for the portion of UK Government funding to local authorities funded by Business Rates in England. This is treated as a reduction in the Block Grant as Business Rates are fully devolved.
[3] HM Treasury has one programme subject to the Block Grant, making up less than 0.01 per cent of their total spending.

A.52 Finally, we assume that Scotland's population share is constant until 2027-28, the end of the December 2022 Scotland's Economic and Fiscal Forecasts horizon.[79] From 2028-29, we calculate Scotland's population share for each year in line with the population projections.

Spending

Devolved social security

A.53 Here we set out the approach used to project social security spending on devolved payments and payments created under devolved power which are forecasted by the Scottish Fiscal Commission. We list the social security payments included in our projections in Figure A.7.

[79] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).

Figure A.7: List of devolved social security payments included in our projection

Devolved social security payments		
Adult Disability Payment	Discretionary Housing Payments	Scottish Adult Disability Living Allowance
Best Start Foods	Employability Services	Scottish Child Payment
Best Start Grant	Employment Injury Assistance	Scottish Welfare Fund
Carer's Allowance Supplement	Funeral Support Payment	Severe Disablement Allowance
Carer's Support Payment	Pension Age Disability Payment	Winter Heating payment
Child Disability Payment	Pension Age Winter Heating Payment	
Child Winter Heating Assistance		

Source: Scottish Fiscal Commission

A.54 We projected the number of people in receipt of payments and the value of the payment received separately.

A.55 Up to 2027-28, the number of people in receipt of payments is aligned with the December 2022 Scotland's Economic and Fiscal Forecasts.[80] From 2028-29, the number of people in receipt of payment are projected by the growth of the relevant population age-groups they form part of. We assume that the number of people in receipt of a payment as a percentage of the eligible population (in terms of age), the prevalence rate, remains constant at 2027-28 levels for the entire projection period.

A.56 Projections for carer payments, which include Carer Support Payment and Carer's Allowance Supplement, are linked to the number of people in receipt of disability payments. To be eligible for the carer payments, a person needs to care for someone in receipt of certain disability payments. From 2028-29 onwards, the ratio of people in receipt of disability payments and the number of people in receipt of carer payments has been kept constant at 2027-28 levels.

A.57 The other element that we project is the average payment received for each of the payments. There are several elements that contribute to the average payment increasing over time. Firstly, most payments are increased each year with inflation. Secondly, on top of inflation-linked increases, there may also be policy changes to increase the payment rates. Finally, some payments have multiple payment rates and historic data shows that over time more clients are awarded higher payment rates.

A.58 In our projection, spending is presented in real terms. Spending projections are grown in line with real wages, rather than inflation. This approach is consistent with the growth in tax rates and the economic projection and ensures the value of payments does not fall relative to earnings.

A.59 Our long-term projections do not factor in the effect any policy changes after 2027-28. For payments with multiple payment rates, we assume that the payment rate composition, for the different recipient age groups, is aligned with our December 2022 forecast up to 2027-28, and constant at the 2027-28 level from 2028-29 onwards.

A.60 There is a subset of payments which, after devolution, have been replaced by Scottish payments. For example, Adult Disability Payment replaced DWP's Personal Independence Payment in 2022. In our forecast up to 2027-28, we assume that replacing these payments will result in an increase in

[80] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).

the number of people in receipt of a payment, and their payment award, and thus an increase in spending compared with the payment replaced. The percentage of additional spending for these payments, which include among others Adult Disability Payment, Child Disability Payment, Pension Age Disability Payment, and Carer Support Payment, has been kept at 2027-28 levels from 2028-29 onwards.

A.61 We obtain the overall social security projected spending by multiplying projected caseloads in each relevant age group by their average awards.

Other areas of spending

A.62 This report is the first time we have projected Scottish Government spending other than social security. We use Classification of the Functions of Government (COFOG) categories to project spending from 2028-29 to 2072-73.[81] We have also reviewed published Local Government finance statistics and Scottish Government budget and Resource Spending Review data to ensure that our baseline spending data is broadly accurate.

A.63 For consistency, we use the same approach to project Scottish Government spending as we do for UK Government spending in our calculation of the Block Grant. This means that any fiscal sustainability implications, or differences with equivalent spending projections for England, are due to existing differences in spending patterns or our demographic projections, not methodological differences.

A.64 We assume that for health, education and social protection spending growth will be influenced by demographics in Scotland. For health, we incorporate additional spending pressure based on historical trends. For all other areas of spending, we assume that they will grow in line with Scottish GDP. We summarise our approach by each COFOG category in Figure A.8.

A.65 All areas of our spending projection are influenced by our assumption for real earnings growth (productivity). This includes those areas of spending we grow in line with Scottish GDP, with our productivity assumption an important contributor to our projection of economic output.

[81] Detail on Scottish Government spending by Classification of the Functions of Government categories can be found on Scottish Government (2022) Scottish Budget: 2023-24 Supporting Documents (link).

Figure A.8: Modelling approach for devolved spending by COFOG area

COFOG category	Spending included	Modelling approach
Areas of spending influenced by demographic pressure		
Education	Schools, higher education, further education	Project with demographics and real earnings
Adult social care (social protection)		Project with demographics and real earnings
Social security (social protection)	Devolved social security payments	Project with demographics and real earnings
Health	NHS services, medical research	Project with demographics, real earnings and additional cost pressures
Other areas of spending		
General Public Services	Executive spending, financial and fiscal affairs	Grow with real Scottish GDP
Other social protection	Children's social work	Grow with real Scottish GDP
Public order and safety	Police services, fire-protection services, prisons, law courts	Grow with real Scottish GDP
Economic affairs	Agriculture, forestry, fishing and hunting, transport, communication	Grow with real Scottish GDP
Environmental protection	Waste management, pollution management, protection of landscapes	Grow with real Scottish GDP
Housing and community amenities	Housing development, water supply, street lighting	Grow with real Scottish GDP
Recreation, culture and religion	Cultural services, devolved BBC broadcasting	Grow with real Scottish GDP

Source: Scottish Fiscal Commission

Five-year projections

A.66 We assume that the Scottish Government will have a balanced budget until 2027-28. We assume that total spending will match total funding available to the Scottish Government, as set out in our December 2022 forecast of funding.[82]

A.67 We first remove social security spending from the total available budget. This is in line with how our forecasts are used in Scottish Budgets, as our forecasts of devolved social security spending are assigned to be spent in each financial year.

[82] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – December 2022 (link).

A.68 In the Resource Spending Review (RSR), Scottish Government committed to passing on additional health funding from the UK Government to the health portfolio. We keep this assumption until 2027-28 and assume that health spending will grow in line with Block Grant funding for Health.

A.69 We calculate spending on all other portfolios from the remaining share of funding available after removing health and social security. We assume that all other portfolios keep their shares of spending as set out in the 2023-24 Scottish Budget.

A.70 We assume that Scottish local authorities have balanced budgets during this period. Spending for local authorities grows in line with grants from the Scottish Government and forecast Council Tax and Non-Domestic Rates revenue.

Projections based on demographic change

A.71 Areas of spending like health, social protection and education are projected in line with the number of people who use those services, and the cost of providing that service them. The rate at which people use services, and the cost of serving them, varies with age and gender.

A.72 These parts of our spending projection are based on age and gender profiles. When we apply these profiles to our changing population structure, we are able to reflect these effects.

A.73 For health, we have also projected additional spending pressure based on historical growth in spending that cannot be explained by demographics or real earnings. These additional growth rates converge to 1.0 per cent in the long term.

Projections based on Scottish GDP

A.74 We grow all other areas of spending in line with Scottish GDP. This assumes that they are constant as a share of Scottish GDP over the long-term. Our broad-brush assumption for these spending areas is that they are not substantially affected by demographics. Instead, they are determined by the resources made available to the Scottish Government through economic growth.

Additional information

Abbreviations

ABG	Annual Budget Gap
BGA	Block Grant Adjustment
CIP	Consumer Price Index
DWP	Department for Work and Pensions
E&NI	England and Northern Ireland
E&W	England and Wales
ELC	Early Learning and Childcare
EU	European Union
FSR	Fiscal Sustainability Report
GDP	Gross Domestic Product
GPs	General practitioners
HM Treasury	His Majesty's Treasury
IFIs	Independent Fiscal Institutions
IPC	Indexed per Capita
LBTT	Land and Buildings Transaction Tax
NDR	Non-Domestic Rates
NHS	National Health Service
NRS	National Records of Scotland
NSND	Non-Savings, Non-Dividend
OBR	Office for Budget Responsibility
OECD	Organisation for Economic Cooperation and Development
ONS	Office for National Statistics
RSR	Resource Spending Review
rUK	Rest of the UK
SFC	Scottish Fiscal Commission
SLfT	Scottish Landfill Tax
SPA	State Pension Age
SSES	Scotland Specific Economic Shock

A full glossary of terms is available on our website:

https://www.fiscalcommission.scot/explainers/glossary/

Professional Standards

The Commission is committed to fulfilling our role as an Independent Fiscal Institution, in line with the principles set out by the Organisation for Economic Cooperation and Development (OECD).[83]

The Commission also seeks to adhere to the highest possible standards for analysis. While we do not produce official statistics, we voluntarily comply as far as possible with the UK Statistics Authority's Code of Practice for Statistics. Further details and our statement of voluntary compliance can be found on our website.[84]

[83] OECD (2014) Recommendation on Principles for Independent Fiscal Institutions (link).
[84] Scottish Fiscal Commission (2018) Compliance with the Code of Practice for Official Statistics (link).

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