Approach to Fiscal Sustainability Consultation Paper

August 2022

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Foreword

The Scottish Fiscal Commission is the independent fiscal institution for Scotland. We produce independent and official forecasts of the Scottish economy, devolved taxes and devolved social security spending. The Finance and Constitution Committee established a Legacy Expert Panel towards the end of the 2016 to 2021 parliamentary session to consider the scrutiny challenges the next committee would face. The Legacy Expert Panel recommended inviting the Scottish Fiscal Commission to publish "a long-term fiscal sustainability report at least once during each session of the Parliament."[1]

The Commission made a proposal to the Finance and Public Administration Committee in September 2021 on how we could approach producing a fiscal sustainability report for Scotland.[2] We began this work in 2022.

We are committed to openness and transparency in all our work and regularly produce reports that set out the approaches we use in developing our forecasts. This report describes our proposed scope and methodology for producing and publishing a fiscal sustainability report in March 2023 and invites feedback on this. With our long-term projections we will aim to provide the Scottish Parliament, policy makers and stakeholders with evidence on some of the long-term pressures and challenges for Scottish Government finances.

We would like to thank the staff of the Commission as well as officials from the Scottish Government, HM Treasury, the Office for Budget Responsibility, and the Northern Ireland Fiscal Council for their support in creating this report.

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30 August 2022

[1] Finance and Constitution Committee (2021) Legacy Expert Panel Report to the Finance and Constitution Committee (link)
[2] Scottish Fiscal Commission (2021) Letter to Finance and Public Administration Committee from Dame Susan Rice about the Fiscal Sustainability Report – 6 September 2021 (link)

Contents

Summary

1. This paper sets out the proposed scope of our Fiscal Sustainability Report (FSR) to be published in 2023 and invites feedback on this from stakeholders and experts. We describe what we mean by fiscal sustainability for the Scottish Government as a devolved government, what we will focus on in the upcoming report, and how we will make our projections and measure fiscal sustainability.

2. This paper is being published alongside our first long-term projection of Scotland's demographics and economy over the next fifty years.[3] In that paper, we discuss how we project the Scottish population to change in comparison to the UK population and the implications of demographic change for the economy. We identify how recent trends, some of which are projected to continue over the next fifty years, have influenced the income tax net position since devolution in 2016-17.

3. The aim of the FSR is to give insight into the long-term outlook for the Scottish Government's finances. The FSR will provide evidence of the longer-term pressures on public finances that will emerge from current policy given the current fiscal framework and as a result of trends in areas such as demography and productivity. These pressures are common challenges among high-income nations; our aim is to consider the scale of that challenge for the Scottish Government and identify which issues are most relevant for the Scottish context.

4. In **Chapter 1** we describe how fiscal sustainability reports give policy makers insight into upcoming challenges and whether public services can continue to be delivered as per current policy in the long term. We discuss how fiscal sustainability is usually thought about as being related to debt but that we will think of it in terms of the balance between funding and spending in the devolved Scottish context. We highlight how interdependences between the Scottish and UK Governments influence our approach to fiscal sustainability. We explain that we make an assumption of 'unchanged policy' for our long-term projections, including that the current fiscal framework arrangements will continue. We set out our plan to focus on demographic change in the 2023 report but also highlight the importance of climate change for fiscal sustainability and set out topics we could explore in the future.

5. We provide background on how Scottish Government is funded via the Block Grant and devolved taxes and explain the role of Block Grant Adjustments in **Chapter 2**. We describe recent trends in Scottish Government spending, in particular how health spending has risen in recent decades, as is common across the UK.

6. We explain how we plan to project the Scottish population, economy, funding, tax revenues and spending in **Chapter 3**. This chapter contains technical detail on our population and economy assumptions, how we will apply the Barnett formula to project funding forward, our assumptions for projecting devolved tax revenues and the Block Grant Adjustments and the assumptions we will use for projecting Scottish Government spending. We discuss potential data sources, and we highlight areas where we are still developing our methodology.

7. We plan to measure fiscal sustainability for the Scottish Government using a measure we have called the 'annual budget gap', which we set out in **Chapter 4**. We explain why more common fiscal sustainability measures based on debt would not be relevant for the Scottish Government so instead we aim to measure the gap between funding and spending each year over our long-term projections. We intend to test scenarios where the UK Government makes changes to its spending and taxation as a stress test for Scottish Government fiscal sustainability.

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

8. **Chapter 5** invites feedback from stakeholders and experts on our plans. We set out a series of consultation questions on the scope of our FSR and our methodology, and seek views on these. We highlight the main themes of the questions here, more detail in provided in Chapter 5, and ask readers to return their views to info@fiscalcommission.scot by 31 October 2022.

    1. Is our approach to projecting Scottish Government funding appropriate?
    2. Is our approach to projecting Scottish Government spending appropriate?
    3. Is the annual budget gap reasonable to use as our main sustainability measure?
    4. Are our stress tests useful for testing the robustness of the fiscal position?
    5. Are readers content with our focus on demographics for our first FSR in 2023?
    6. What topics should we focus on for future FSRs?
    7. How should we use stress tests to assess Scottish Government fiscal sustainability?
    8. Is our scope fitting for the aims of our FSR?

Chapter 1
Our approach to fiscal sustainability

Fiscal sustainability in the devolved Scottish context

Introduction

1.1 In this chapter, we set out our approach to projecting fiscal sustainability for the Scottish Government. We describe the value of long-term fiscal sustainability projections and what we mean by fiscal sustainability. We explain how other Independent Fiscal Institutions (IFIs) approach fiscal sustainability and how we will approach it for the Scottish Government given the rules of the fiscal framework. We also explain the interdependencies between the UK and Scottish Governments which we will need to consider.

Why fiscal sustainability is important

1.1 The findings of our Fiscal Sustainability Report (FSR) will tell us about the sustainability of public services and be relevant for policy makers as well as all those interested in the continuity of public services.

1.2 Measures of fiscal sustainability tell us whether current policies in spending and revenue-raising can continue long-term given how the population and the economy are set to change. By providing insights into the long-term health of public finances they indicate areas where risks and pressures may materialise. For example, there has been an economic slowdown in high-income countries since the 2008-09 recession while pressures on spending related to population ageing continue to grow.

1.3 FSRs show whether continuing public spending and revenue raising in line with current policy will put public finances under pressure and become a fiscal risk. They can indicate when these pressures may become problematic, the scale of the challenge and how demographics or other factors such as economic growth influence that pressure on public finances. The projections then allow future governments to plan accordingly for demographic and economic trends and consider what policy adaptations may be needed.

1.4 The Office for Budget Responsibility (OBR) have published FSRs biennially between 2011 and 2020, they published Fiscal Risk Reports in intervening years. In July 2022, they combined these into a Fiscal Risks and Sustainability Report.[4] Their FSRs include fifty-year projections of public spending, revenue, and borrowing and debt, and consider how the UK Government's debt position will evolve if tax and spending continue as projected.

1.5 The OBR's most recent report published in July 2022 showed UK Government debt reaching 267 per cent of Gross Domestic Product (GDP) by 2071-72, well above the 75 per cent of GDP level

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

at the UK Government's pre-pandemic March 2020 Budget.[5] These increases are projected to occur because of the long-term pressures of an ageing population on public spending, most specifically on health spending, combined with a loss of net-zero-affected revenues. The OBR note that these projections should be considered in the context of several risks which would further increase UK Government borrowing and debt levels. For example, if higher defence spending is required in response to geopolitical tensions, or if higher energy prices result in a recession and require additional fiscal support for households. Under these scenarios the debt-to-GDP ratio would increase further.

1.6 The OBR projections show how a continuation of current policy results in an unsustainable path for the UK public finances and debt. The public finances will need to be adjusted before this happens. The response of the UK Government could affect the Scottish Government's Budget in the following ways. Lower public spending relative to the OBR's projections would reduce Scottish Government funding via the Barnett formula if reduced spending were in devolved areas. Higher taxes would either be paid directly to the UK Government if reserved taxes increase, or if changes are made to devolved taxes, then this would affect the Scottish Government's funding. The Scottish Government would have to respond by either increasing taxes or reducing spending.

What we mean by fiscal sustainability

1.7 Fiscal sustainability reports use projections of the population and the economy to project government spending and revenues in the long term.

1.8 Fiscal sustainability reports are inherently different to medium-term forecasts, such as those we publish twice a year. In medium-term forecasts, we take great care to forecast as precisely as possible. Long-term projections are more illustrative as there is greater uncertainty regarding policy change as well as how the population and economy may evolve. The key aim is to highlight how broad trends will affect the public finances over time. We use the term 'projection' rather than 'forecast' in relation to the long-term analysis to reflect this.

1.9 Our analysis will show what would happen given certain assumptions about the population and economy and holding current policy constant. It will show the risks from a changing population to the sustainability of current policy. The report will provide insight into what adaptations may be required and when those adaptations would be best enacted to ensure the sustainability of public finances. Although there is uncertainty and we do not claim our projections to be precise in the long term, the challenges shown by the sustainability analysis are real and these are what our report will focus on.

Typical approach to fiscal sustainability reports

1.10 Generally FSRs provide discussion of how the population size and structure is likely to change over the projection period; long-term assumptions will be made for the economy and recent trends discussed. Government revenue and spending is typically projected in line with the growth of the economy and by demographic factors for areas sensitive to these. Where there is a difference between revenue and spending, it is generally assumed to be added to public debt. This approach is taken with national governments and for sub-national governments such as in Canada and Australia where states have borrowing powers.

1.11 Most definitions of fiscal sustainability are based on solvency or whether a government can meet its current and future obligations based on existing plans. In most cases this is assessed through the projected path of borrowing and whether interest payments on accumulated debt take up a large

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

and increasing amount of national income. This highlights if there is an imbalance between revenue and spending.

1.12 The current public sector balance sheet, its debt and reserve, is often used as a starting point for projections in a FSR. This captures the effect of historic government activity which also influences future activity such as capacity to borrow and interest payments. Fiscal sustainability is often expressed as the debt-to-GDP ratio and as the percentage of GDP change required in spending or tax raised to reach a certain debt-to-GDP ratio. Although there is no ideal debt-to-GDP level to compare against, showing the gap between certain ratios or comparing the ratios at the start and the end of the projection period gives insight into whether spending and taxation is sustainable by considering the debt burden. High levels of debt can result in government funds being diverted from investment and public services, and could result in a country's credit rating worsening which could increase the cost of future borrowing.

1.13 The fiscal arrangements for the Scottish Government under the current constitutional settlement are different. The Scottish Government cannot issue debt to a substantive level and therefore we cannot use the typical approaches to FSR outlined above and need an alternative approach to examining fiscal sustainability.

Fiscal sustainability under the Scottish Government's fiscal framework

1.14 The rules of the Scottish Government's fiscal framework affect how we can assess fiscal sustainability. We can project the population, economy, spending and funding but the Scottish Government has limited borrowing powers. The Scottish Government cannot accumulate substantial debt and it is required by its fiscal framework to have a broadly balanced budget. It can manage underspends through the Scotland Reserve but this is also limited. The Scottish Governments use of the Reserve and its borrowing powers does not provide insight into the long-term sustainability of public finances. This makes a debt-to-GDP ratio unusable as a fiscal sustainability measure for Scotland.[6]

1.15 Our approach to analysing fiscal sustainability therefore focuses 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 will focus on the changes that would arise in public spending if public services were to be maintained as they are now over the next fifty years, showing the pressures which may arise from an ageing population, and rising prices and wages. If spending commitments on services such as health and education are maintained but the population changes as it is projected to, our analysis will show the resulting spending levels. We will project the funding the Government would have from taxation and the Block Grant, again assuming current policy and the current fiscal framework but based on the projected population and economy.

1.17 Another way in which the Scottish Government's position is unique is through the role of devolved taxes and Block Grant Adjustments (BGAs). We explain these in more detail in **Chapter 2**. The total amount of devolved tax revenue raised is less important than the net position which is produced

[6] The Scottish Government receives funding from the UK Government which is funded through UK-wide taxes and borrowing. The UK Government is responsible for managing the UK Budget and borrows to manage budget pressures. Although we cannot use the debt-to-GDP to measure Scottish Government fiscal sustainability, UK Government borrowing and its effect on UK public finances has implications for Scotland.

after the Block Grant is adjusted for the UK Government having foregone that tax revenue. This means Scotland's relative economic performance within the UK is an important factor in its fiscal sustainability.

1.18 Our sustainability analysis will hold constant the current fiscal framework and policy context (see **Section on Devolution Arrangements and Constitutional Framework** describing our approach to an unchanged constitutional and policy context). Given these assumptions and our population and economy projections, we will project future Government funding and spending on public services. This allows us to assess whether there would be a gap between funding and spending each year and how this evolves over time. We discuss our proposed sustainability measure, the annual budget gap, in more detail in **Chapter 4**.

1.19 We remind readers of the points made in the **What we mean by fiscal sustainability section** on the nature of these projections and how to interpret them. The analysis will not be a precise estimate of the funding and spending positions or of a gap between them but an insight into the scale of pressure on these given how the Scottish and UK populations and economies evolve.

1.20 It is important to remember that this is a theoretical gap between funding and spending as the rules of the fiscal framework require the Scottish Government to balance its budget each year. Our projections will show the scale of change the Scottish Government would need to make in each year to ensure funding and spending balance. This could be through reductions in spending or increases in tax revenues.

1.21 Our annual budget gap will differ to typical measures such as debt-to-GDP where the gap between revenue and spending in one year is added to government debt and therefore affects government spending on interest in subsequent years. Care must therefore be taken in comparing our sustainability measure to other nations' debt gap or debt-to-GDP ratio as ours does not accumulate 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

1.22 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.

1.23 UK Government fiscal policy affects the available funding for Scotland as the Block Grant is determined by UK Government spending in devolved areas such as health and education.

1.24 The Block Grant (net of adjustments for Scottish tax revenues and social security payments) accounts for approximately 57 per cent of resource funding to the Scottish Budget in 2022-23. It is determined by UK Government spending in areas which are devolved to the Scottish Government, which means that Scottish Government funding is closely linked to UK Government spending decisions. We describe Block Grant funding in **Chapter 2** and our approach to projecting it in **Chapter 3**.

1.25 Ultimately the UK Government's fiscal policy significantly 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. While if the UK Government reduces spending in devolved areas this reduces the level of funding the Scottish Government receives.

1.26 The overall fiscal sustainability of the UK has implications for Scotland. The OBR assess UK fiscal sustainability in their FSR so we do not address this issue directly but we consider how UK-wide sustainability issues could influence Scotland.

1.27 Typically, demographic change due to population ageing is a substantial challenge for the sustainability of a nation's public finances. This will apply to Scotland but interdependency with the UK brings another dimension to this. For some parts of our FSR analysis, relative differences between Scotland and the UK will be a factor such as how the Barnett formula for Block Grant funding uses Scotland's relative share of the UK population. However the UK finances are under pressure due to population ageing which, as the OBR 2022 Fiscal Risks and Sustainability Report has shown, will leave public debt on an unsustainable path in the long term.[7] This is a risk for the Scottish Government as the UK Government will need to respond to these long-term pressures with likely consequences for the Scottish Government's funding position. In the **Chapter 4** Robustness to shocks section we talk about how we can bring this into our fiscal sustainability analysis.

1.28 The BGAs for taxes devolved to Scotland depend on UK Government tax revenues. The Scottish Government's tax revenues must be compared to the BGAs to assess the contribution to funding, known as the tax net position. Here Scotland's economic performance relative to the rest of the UK is important for determining the tax net position, as well as both the Scottish and UK Governments' tax policies.

1.29 Our projection of the Block Grant and BGAs will indicate the long-term trajectory of funding given the current devolution agreement and our Block Grant projection will be informed by the OBR's projection of UK Government spending in devolved areas. The OBR's 2022 FSR showed a growing debt-to-GDP ratio for the UK given their assumptions of revenue and spending continuing as per current policy. These gaps are theoretical in nature as in practice the UK Government will have to undertake action in revenue raising or spending cuts to manage debt.

1.30 Assuming the UK Government does take action to control the debt-to-GDP ratio, the results could have implications for the Scottish Government's funding position. If UK spending is cut in devolved areas, it would affect the Scottish Block Grant negatively while spending cuts in reserved areas would not affect Scottish Government funding though may still have implications for Scotland. Similarly, UK Government changes to devolved taxes affect the Scottish Government's funding. If, for example, the UK Government increases income tax rates then the BGA for income tax would increase, reducing Scottish Government funding. The Scottish Government would then need to decide whether to alter tax policy or change its spending plans to match the adjusted level of funding.

1.31 The interdependencies between the Scottish and UK Governments bring additional complexity to our fiscal sustainability analysis. Approaches typically undertaken in FSRs such as applying high and low population or economic growth scenarios or external shocks as stress tests do not have the same relevance for Scotland as the relative position with the UK is an important factor. We will account for these interdependencies in our projection of the Block Grant and BGAs which use UK wide spending and income tax projections. This is set out in **Chapter 3**. In **Chapter 4** we set out the scenarios we intend to use as stress tests to our fiscal projections.

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

Unchanged policy and devolution

Introduction

1.32 FSRs are generally based on an assumption of 'unchanged policy' in order to produce economic and fiscal projections. We outline in this section what that means in the Scottish context and for our FSR. Some of this relates to points discussed more in detail in **Chapter 3** on Methodology, where we outline how this is applied to taxation and spending policy. We set out how we assume unchanged policy in the context of a potential Scottish independence referendum.

What we mean by unchanged policy

1.33 FSRs generally assume that revenue raising and spending policy continue in line with current Government policy. This is not done because IFIs assume it is the most likely scenario but because it provides a useful baseline to project fiscal pressures over a fifty-year horizon, and shows how current decisions could affect the future position. The focus is less on specific policies but more about the implications of current trends.

1.34 Using an assumption of unchanged policy allows us to identify when current policy trends become unsustainable and to best identify the factors causing that. Disentangling the effects of pressures such as demographic change from a speculated policy change would be complex. Using an assumption of unchanged policy gives policy makers insight into where changes may need to be made.

1.35 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, such as the freeze to the income tax higher rate threshold which we assume continues for our five-year forecast horizon, until 2027-28. To support the Resource Spending Review (RSR) in May 2022 we included Scottish Government planned policy on new social security payments. Although not all the details of implementation were confirmed, the Scottish Government's approach was set out in the Scottish Social Security Charter.[8] Our indicative forecasts were used by the Government to set the social security spending allocation for the RSR.

1.36 Our medium-term forecasts will be the starting point for our long-term projections. We will set out five-year forecasts for the economy, tax and social security alongside the Scottish Budget for 2023-24 in our next Scotland's Economic and Fiscal Forecast publication. This will inform the first five years of the long-term projections in the 2023 FSR. We provide more detail on this when discussing the methodology in **Chapter 3**.

1.37 We explain in detail how we will apply our unchanged policy assumption in **Chapter 3**. We note here that we will modify how we apply 'unchanged policy' for some of the long-term projections. For instance, the higher and top rate income tax thresholds have been assumed fixed in Scotland and other thresholds rise with inflation. Assuming this over a fifty-year projection would result in earners moving into higher bands and 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 plan to grow rates and bands in line with average earnings. This is consistent with how other IFIs project taxation in the long term. Allowing fiscal drag to continue indefinitely would inflate tax revenues.

[8] Social Security Scotland – Our Charter (link)

Devolution arrangements and constitutional framework

Background

1.38 Our FSR focuses on the Scottish Government's public finances based on the current devolution settlement. This will indicate the trends and some of the challenges future Scottish Governments are likely to face in the decades ahead. As per our approach with unchanged policy, we assume an unchanged constitutional arrangement.

1.39 There are several developments expected over the next year which may alter the fiscal framework that determines the Scottish Government's funding position and spending powers. The Scottish Government and HM Treasury (HMT) will, for example, undertake a review of the fiscal framework over the next year. This may alter the devolution settlement and the Scottish Government's funding arrangements which would in turn affect the future fiscal sustainability of the Scottish Government's finances.

1.40 The Scottish Government has proposed holding a referendum in October 2023 on Scottish independence and set out the steps for how this might happen.[9] The UK Government's position is that 'now is not the time' for a referendum.[10] Debates over independence and Scottish public finances are likely to continue through the period in which our papers are published. It is important therefore to set out the role of the Scottish Fiscal Commission on these issues.

Assumption on the constitutional framework for our FSR

1.41 We will assume the current constitutional framework continues in our long-term projections. Although the Scottish Government and HMT are due to review the fiscal framework, the outcome is uncertain, and some parts of the existing fiscal framework and Scotland Act 2016 have not yet been enacted. 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 and we do not plan to include these in our assessment of the Scottish Government's fiscal sustainability. Similarly, we have no mandate for producing a FSR for a potentially independent Scotland and there is too much uncertainty to make projections for potential alternative constitutional arrangements.

1.42 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 will 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.

1.43 Any analysis of fiscal sustainability in an independent Scotland would need to be based on assumptions about a very wide range of factors, which would only be known following independence. The Scottish Government plans to publish papers on monetary and fiscal arrangements which will set out the options the Scottish Government is considering. In the event of independence, the actual arrangements would depend on the outcome of negotiations with the UK

[9] Scottish Government (28 June 2022) Independence referendum: First Minister's statement – 28 June 2022 (link)
[10] UK Government (6 July 2022) Letter from the Prime Minister to the First Minister (link)

Government and the European Union. Therefore, any assessment of the fiscal and economic effects of independence would need to be based on assumptions until the negotiations concluded.

1.44 The Commission is restricted by its founding legislation and cannot consider the effects of policy options until the Scottish Government has reached a firm policy decision. We can, however, be clear about the limits of current analysis and the information and policy intentions that are required to be in place to conduct a detailed analysis of potential fiscal sustainability of the Scottish Government under alternative constitutional arrangements.

1.45 Many of the trends we will consider, such as the likely changes in Scotland's population structure, and the trends in productivity will be powerful factors that will have a major bearing on long-term fiscal sustainability whatever constitutional settlement is in place. These factors will evolve slowly and would be relevant if a new constitutional settlement were in place. Though there would be differences if this were to occur, the analysis would still be relevant particularly in the early years. For example, as time passes, fiscal and economic trends would be increasingly influenced by new policies, costs and opportunities that might arise from different constitutional and fiscal structures. The focus on fiscal and economic performance relative to the rest of the United Kingdom, which is important under the current fiscal arrangements, may become less relevant.

1.46 We note that in our five-year forecasts published in Scotland's Economic and Fiscal Forecasts series we are monitoring the degree of uncertainty in Scotland. If in our view this uncertainty is likely to affect business or household decisions, we will include this in our medium-term economic and fiscal forecasts, and this will affect the starting position for the long-term projections.

Topics for the first and future FSR

Introduction

1.47 We propose to focus on demographic pressures in our 2023 FSR and we explain our rationale in the next section. There are many more topics which are important for fiscal sustainability, but we do not have the capacity to do justice to investigating all of these in our first report. The **Climate change section** discusses the fiscal implications of climate change in more detail as a particular area we identify as being important for fiscal sustainability but we acknowledge that it is beyond our capacity to investigate fully for our first report. We invite feedback on the topic of the first report and the topics we propose for future reports in **Chapter 5**.

Demographic pressures

1.48 We propose to focus on the effects of demographic change in our 2023 FSR. Population ageing is a challenge and a risk to fiscal sustainability among many nations as the baby-boomer generation has retired and life expectancy has grown continuously in previous decades. Population ageing typically means a decreasing working age population contributing to growth and revenues while an increasing older age population results in higher public spending through state pensions, and health and social care needs.

1.49 Demographic change will be very important for public finances. We discuss our population and economic projections for the next fifty years in our 'Trends in Scotland's population and effects on the economy and income tax' paper.[11] This discusses the effect of population ageing on the economy. Demographic change will have implications for Government spending too, analysis

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

undertaken by the Scottish Government in its feasibility of distributional analysis study shows that health spending, the largest area of spending in the Scottish Budget, is concentrated in the older population. [12]

1.50 FSRs typically project economic growth, government revenue and spending given a set of economic assumptions and holding current revenue raising and spending plans constant. The changeable factor informing the fiscal sustainability analysis is usually projected population change. This allows policy makers and those interested in the fiscal future of a country to see when current policy may become unsustainable and needs to change.

1.51 In future reports, we will make projections in the same way but we would expect to investigate specific topics or scenarios further. For our first report, we want to investigate the role of demographic change fully and do justice to this important topic. We see this as a prerequisite to undertaking more complex analysis in future reports. For some topics we propose exploring in the future such as healthcare, demographic change would still be one of the most important factors. Therefore it is important that we produce quality models, analysis, and narrative for the first report to allow for more complex analysis and scenario testing in future reports.

1.52 We are aware of the risks of exploring multiple topics in our first report which could then prove difficult to disentangle. We see exploring demographic change in our opening report as providing a baseline for our future analysis and ensuring policy makers gain insight into the coming pressures and risks for existing programmes of tax and spending and give them the opportunity to reflect on how they might handle these pressures.

Climate change

1.53 Climate change has societal, economic, and fiscal implications. For governments it presents a fiscal risk, and we recognise that climate change will have significant effects on individuals, the economy, and society, and hence on fiscal sustainability.

1.54 There are risks from physical change like the global rise in temperatures, unstable weather, and rising sea levels. These could put pressure on existing public services as well as affecting the economy and tax revenue.

1.55 The efforts by individuals and governments to mitigate climate change are also a fiscal risk. While many governments have announced targets for hitting net zero emissions, the policies needed to achieve these are often less clear. There will be effects on government revenues from taxes they impose to encourage people to switch to cleaner technologies. For example, as people and businesses switch to electric vehicles, revenues imposed on petrol and diesel consumption will fall – as highlighted by the OBR in its recent report on UK fiscal sustainability.[13]

1.56 There are efforts by individuals and governments to adapt to climate change and so avoid some of the losses identified above arising from climate change itself. For example, governments may want to ban future building development in certain areas prone to flooding.

1.57 Like an ageing population or other sources of pressure on public finances, climate change is relevant for FSRs. Addressing it accordingly is relatively recent among IFIs and in FSRs, often this is done in conjunction with bodies which have expertise on the future effects of climate change in their countries. Climate change presents a challenge in terms of being a relatively new area for IFIs to

[12] Scottish Government (2021) Budget 2019 to 2020: feasibility of distributional analysis – study (link)
[13] OBR (2021) Fiscal risks and sustainability – July 2022 (link)

make projections in relation to and for its potential volatility, disruption, and capacity to create change in economic sectors, to the tax base, to spending, and in creating crises to which governments must respond. The OBR included an assessment of climate change risks in its 2021 Fiscal Risks Report and undertook a qualitative assessment in its 2019 Fiscal Risks Report.[14,15] Their most recent report incorporated estimates of motor tax revenue loss from the transition to Net Zero into their baseline projections.[16]

1.58 The projections we provide in the 2023 FSR will provide useful insight for policy makers working on climate change in regards to the level and timing of demographic and other pressures affecting the funding position. By not adjusting our projections for climate change costs, it allows policy makers to see the scale and type of changes which will need to be made before action is taken to address climate change. We are also aware of the difficulties of potentially bringing several scenarios together in our first report and disentangling their effects on the fiscal outlook.

1.59 The Scottish Government has committed to reach net zero emissions of all greenhouse gases by 2045. The 2045 net zero target was the result of amendments in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.[17] The Climate Change Committee provides advice to the Scottish Government and publishes annual progress reports, and a Climate Change Plan is in place for 2018 to 2032. The UK Government has legislated to achieve net zero greenhouse gas emissions by 2050.[18]

1.60 Part of the value of undertaking climate change analysis in FSRs is through comparing them to a baseline scenario to illustrate the fiscal effects of physical risks of climate change and of early or late climate change mitigation and adaptation. Our first FSR will provide the baseline for future analysis, including climate change.

1.61 There are still unknown factors in exactly how the Scottish Government will enact its plans for reaching net zero. For us to meaningfully produce an analysis of climate change risks, further detail on Scottish Government plans would be helpful and we also acknowledge that the Commission would need to develop expertise in combining climate analysis with long-term fiscal projections.

1.62 We recognise the need to provide more detailed analysis of the fiscal implications of climate change in future reports. This will be an aspect of fiscal sustainability that will require continual updating by us and other IFIs as new programmes of taxation and spending are developed by governments and as the more precise effects of climate change in different countries becomes clearer.

1.63 In the following section we set out areas we consider important for fiscal sustainability, and we invite readers to respond by ranking these areas and suggesting any which we have not covered. Climate change is included in this list and it is an area we would expect to publish a report on in the coming years.

Topics for future reports

1.64 We list topics in this section which we have identified as potentially important to investigate in future FSRs. In **Chapter 5**, we invite readers to respond on which topics they consider important and to rank the topics they consider a priority.

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[14] OBR (2021) Fiscal risks report (link)
[15] OBR (2019) Fiscal risks report (link)
[16] OBR (2021) Fiscal risks and sustainability – July 2022 (link)
[17] Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (link)
[18] The Climate Change Act 2008 (2050 Target Amendment) Order 2019 (link)

- Pressures on fiscal sustainability
    - Effects of climate change
    - Population health and health inequalities
    - Role of migration (international and from the rest of the UK)
- Effects of pressures on fiscal sustainability
    - Health spending
    - Adult Social Care
- Policy areas (pressures and effects)
    - Child poverty
    - Achieving Net Zero

Outline for FSR 2023

1.65 In this section, we show the expected outline of our FSR which we plan to publish in March 2023. We note that the outline is subject to change, and we invite feedback on this in our consultation. Broadly we would expect the main areas set out to be covered in the FSR.

- Introduction
- Demographic projections
- Economic projections
- Long-term fiscal projections
    - Funding
        - Block Grant
        - Scottish income tax and fully devolved taxes
        - Block Grant Adjustments
    - Spending
        - Health
        - Social care
        - Social projection (excluding social security)
        - Social security
        - Education
        - Other areas of spending

- Key results for the annual budget gap
- Discussion on the role of ageing costs
- High and low scenarios and stress tests
    - Reduced UK Government spending in devolved areas
    - Increased UK Government taxation in devolved areas
    - High and low population divergence with the UK
- Risks and uncertainties
    - Uncertainties and limitations of projections
    - Discussion of new risk factors emerging between now and publication
- Methodology and assumptions

Chapter 2
Scottish Government public finances background

Introduction

Overview

2.1 This chapter sets out background on Scottish Government funding and spending over recent years. We explain the different components of Scottish Government funding – via the Block Grant, taxes, and Block Grant Adjustments (BGAs). We discuss Scottish Government spending showing some recent trends over time.

2.2 This provides background to our projection methodologies discussed in **Chapter 3** and will provide context for understanding our projections of Scottish Government funding and spending in next year's Fiscal Sustainability Report (FSR).

Block Grant funding

Background

2.3 The Block Grant predates the current devolution arrangements. Its origins date back to the Scottish Office, the UK Government department set up in 1885 to oversee multiple Scottish affairs. The funding that was available to the Scottish Office, known as the Scottish Block, increased as it took on more functions.

2.4 In the late 1970s the allocation of funding to Scotland was made more systematic with the introduction of the Barnett formula. On top of the existing Block Grant, the formula allocates a population-based share of any changes in the level of spending of UK Government departments on matters devolved in Scotland. When the Scotland Act 1998 created the Scottish Executive, it inherited the funding to Scotland from the Scottish Office.

2.5 The Block Grant is the biggest contributor to the funding available to the Scottish Government. Based on the latest funding position for the 2022-23 Budget, the net Block Grant – that is, after adjusting for devolved taxes and social security – makes up 57 per cent of the resource funding available, and almost all capital and financial transactions funding.[19]

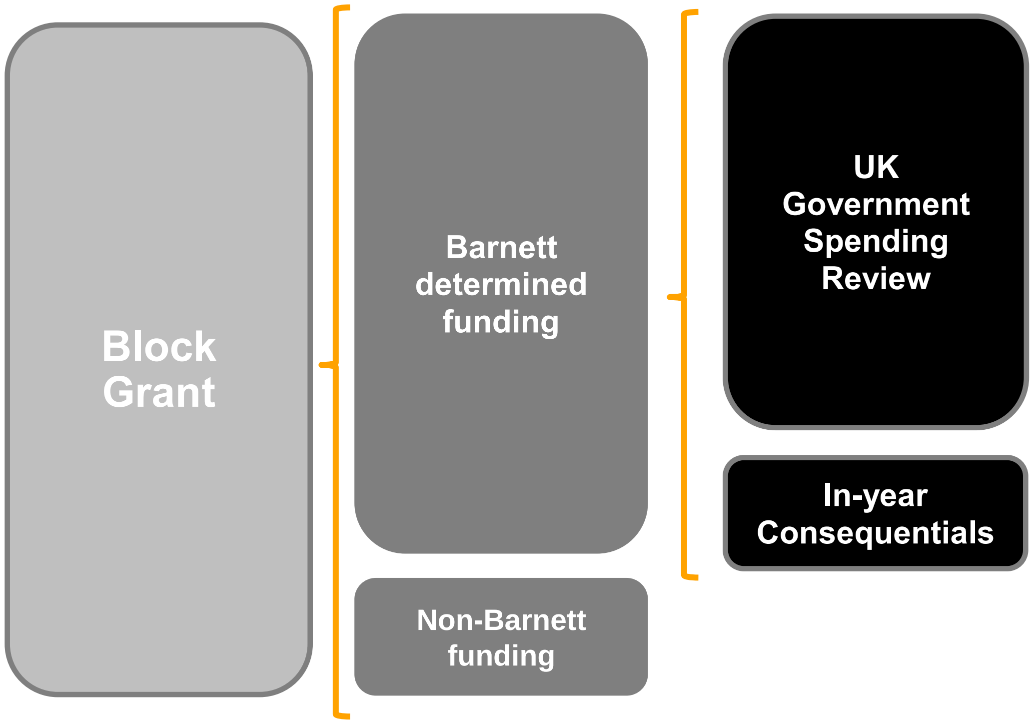
Barnett determined Block Grant

2.6 The Block Grant funding each year is determined by changes in UK Government spending in areas devolved to the Scottish Government. The Barnett formula is applied to these changes in spending to produce the Barnett consequentials Scottish Government will receive. The consequentials are then added to the Block Grant funding that Scottish Government received in the previous year, to determine the total Block Grant funding.

[19] Scottish Fiscal Commission (2022) Fiscal Update – May 2022 (link)

2.7 Figure 2.1 provides an illustration of components of the Block Grant; the majority is Barnett determined funding. This funding is based on UK Government spending in areas that are devolved to the Scottish Government for example, generated by a change in transport policies in England. The Scottish Government can spend the Block Grant according to its own policy priorities, in line with the budgets that the Scottish Parliament approves. Most Barnett funding for the Scottish Government is set out in the UK Government Spending Review. In-year consequentials are a change to the Scottish Government's funding due to a change in UK Government spending outside what was set at the Spending Review.

Figure 2.1: Composition of the Block Grant



Source: Scottish Fiscal Commission

2.8 The Barnett formula is made up of three components: UK Government changes in spending, the comparability factors, and the populations of each area. These are multiplied together to give Barnett funding. This is then added to the previous year's Barnett-determined Block Grant to get a given year's Barnett-determined Block Grant funding. Figure 2.2 shows how the formula works.

Figure 2.2: 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 rUK population refers to either England or England and Wales, depending on the particular area of devolved spending.

2.9 Changes in UK Departmental spending are mainly set out when there is a UK Spending Review. Subsequent fiscal events, such as Budgets or Statements, often amend these spending plans.

2.10 Comparability factors tell us how much of a UK Government Department's spending is devolved. These comparability factors can change over time. They are contained within the Statement of Funding Policy documents that HM Treasury (HMT) produces alongside each UK Spending Review. These comparability factors are made up of programme-by-programme comparisons within a UK Government department. A programme is assigned a factor of 100 per cent if it does relate to a devolved area or zero per cent if it does not. These are then weighted and used to construct a total departmental comparability factor.

2.11 The population factors are the most recent ONS mid-year population estimates at the time of the Spending Review and are used to work out Scotland's share of the relevant rest-of-the-UK population. Figure 2.3 shows the population estimates used in the 2021 UK Spending Review.

Figure 2.3: Scottish population profiles used in the 2021 UK Government Spending Review

Area	Population	Scotland proportion (per cent)
Scotland	5,466,000	
England	56,550,138	9.7
England and Wales	59,719,724	9.2

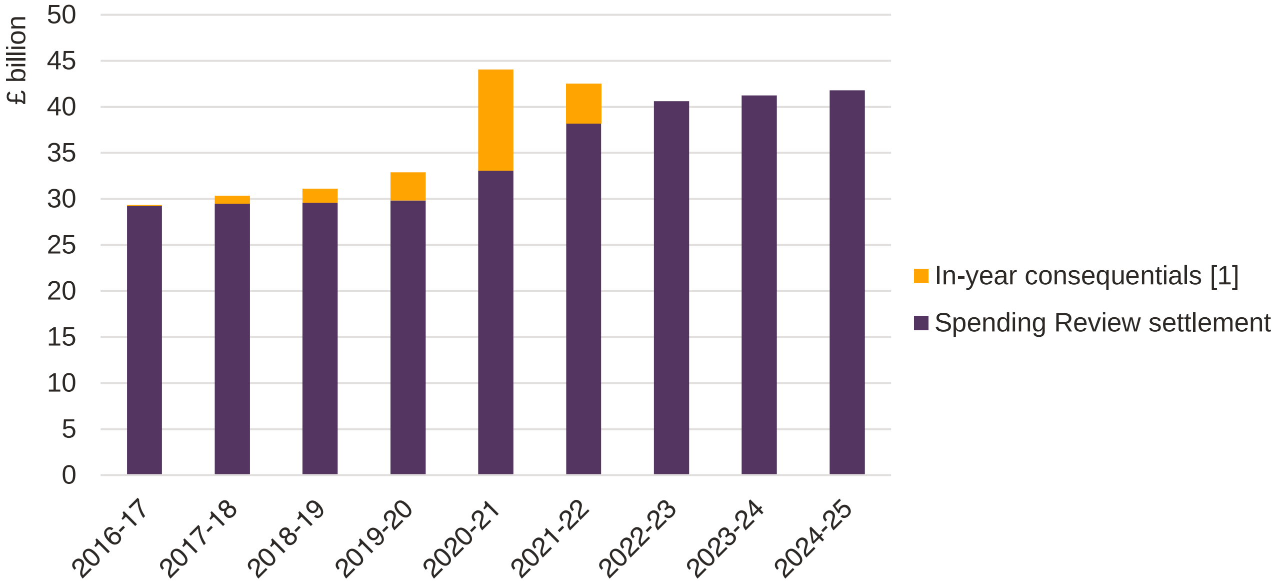
Source: HM Treasury (2021) Block Grant Transparency: December 2021 (link), ONS (2021) Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2020 (link).

2.12 Depending on the area of spending, Block Grant funding is determined either by Scotland's share of England, or England and Wales if the spending area is not devolved to the Welsh Government. Because all areas of spending for the Scottish Government are also devolved to the Northern Ireland Executive, we do not include the Northern Ireland population in Figure 2.3. Similarly, we do not include the Welsh population by itself as there are no areas of spending exclusive to Wales that affect the Block Grant.

2.13 Spending Reviews set expenditure limits for UK Government departments and indicate the initial Block Grant for the period covered. However, as the economic, fiscal and political circumstances change, especially the further away in time from a Spending Review, there are often changes to the spending plans.[20] Figure 2.4 shows that, since 2016-17 there has been additional funding to the Scottish Government via Barnett consequentials on top of what was set at the UK Spending Reviews.

[20] Changes are formally implemented at UK fiscal events through the Supply Estimates process.

Figure 2.4: Total Block Grant settlements and in-year consequentials, 2016-17 to 2024-25



Source: Scottish Fiscal Commission, UK Government (2021) Block Grant Transparency: December 2021 (link). Resource, Capital, Financial Transactions and COVID-19 related funding is included, and depreciation and other non-cash funding is excluded. Resource funding is before Block Grant Adjustments.
[1] This chart uses Block Grant Transparency: December 2021 data, and so does not include consequentials from the March 2022 Spring Statement. There are also likely to be consequentials for 2022-23 onwards at future UK fiscal events.

Tax revenues and Block Grant Adjustments

Summary

2.14 The Scotland Act 2012 devolved taxes on land and buildings transactions and disposals to landfill to Scotland. The Scottish Government implemented these as Land and Buildings Transaction Tax (LBTT), and Scottish Landfill Tax (SLfT). The Scotland Act 2016 partly devolved Non-Savings and Non-Dividends (NSND) Scottish income tax which is the largest tax devolved. In 2022-23 devolved tax revenues made up around 37 per cent of the resource funding available for discretionary spending.[21]

2.15 The fiscal framework agreement between the UK and Scottish Governments sets out how the Block Grant is adjusted to reflect the taxes now foregone by the UK Government.[22] These adjustments are called Block Grant Adjustments (BGAs).

Devolved tax revenues

2.16 We forecast Scottish income tax, LBTT and SLfT revenue in Scotland. Income tax is collected by HM Revenue and Customs (HMRC), and LBTT and SLfT are collected by Revenue Scotland.

[21] Omitting ‘NDR Distributable amount’, which is included in the budget, but is ring-fenced and returned to local authorities, so it is not available for discretionary spending. Forecast tax revenues (£14,589 million) are based on May 2022 forecasts for LBTT and SLfT but the December 2021 forecasts for income tax, since income tax revenues for funding purposes are fixed for the financial year based on the forecasts used when the Scottish Budget is set.
[22] The agreement between the Scottish Government and the United Kingdom Government on the Scottish Government’s fiscal framework (2016) (link)

2.17 We also forecast Non-Domestic Rates (NDR) revenues, which have been devolved to the Scottish Parliament since it was founded in 1999. NDR revenues are collected by local authorities, and must be used by Scottish Government to provide funding to local authorities.

Block Grant Adjustments

2.18 Our May 2021 paper 'Funding for the Scottish Budget' detailed how BGAs are calculated and indexed.[23]

2.19 BGAs are based on the revenue raised in Scotland for each devolved tax in the year prior to devolution (the BGA baseline) and then indexed based on growth in the equivalent tax revenues in England and Northern Ireland, adjusting for population changes.

Tax net position

2.20 The tax net position is the difference between Scottish tax revenue and the BGAs. The net position can add to, or subtract from, the funding available for Scottish Budgets.

2.21 At the time the Scottish Budget is set, tax revenues are based on our forecasts and the BGAs are calculated based on the Office for Budget Responsibility (OBR) forecasts. When outturn data are published, final BGAs can be computed and reconciliations applied to the Scottish Budget.[24]

2.22 Our 'Trends in Scotland's population and effects on the economy and income tax' paper provides an analysis of the factors influencing the income tax net position over a ten year period, including differences in employment and earnings between the UK and Scotland and in the tax policies of the UK and Scottish Governments.[25]

Scotland Reserve

2.23 The Scottish Government can use the Scotland Reserve to transfer unspent or unallocated funds between years.[26]

2.24 The overall limit of the Scotland Reserve is fixed at £700 million, although the size of the Scottish Budget has increased steadily since the fiscal framework was agreed in 2016.

Borrowing

2.25 The Scottish Government has limited borrowing powers under the rules of the fiscal framework.[27] The Scottish Government can only borrow for resource spending in the event of forecast error relating to the devolved taxes and social security payments and for in-year cash management. The annual limits are also small relative to the resource budget. The Scottish Government borrowed for

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[23] Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link)

[24] For LBTT and SLfT there is an additional in-year reconciliation based on updated OBR forecasts produced at the time of at the UK Government autumn fiscal event.

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

[26] Further information on the Scotland Reserve can be found in Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link)

[27] Further information on the Scottish Government's borrowing powers can be found in Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link).

resource for the first time in 2020-21, relating to the first income tax reconciliation that related to 2017-18.

2.26 Since 2015-16 the Scottish Government has been able to borrow to fund additional capital investment. Following the final capital borrowing decisions for 2021-22, the Scottish Government currently has around £1,800 million of accrued debt. This is 60 per cent of the overall limit, which is capped at £3,000 million.

Scottish Government spending

Overview

2.27 Responsibility for delivery of public services in Scotland is split between the UK Government and Scottish Government.[28] A recent Scottish Government paper summarised the areas that remain reserved to the UK Government as follows:[29]

- Foreign affairs and international trade
- Fiscal, economic, and monetary system, including most aspects of taxation
- Most social security payments including universal credit, child benefit, state pension and pension credit
- Tax credits
- Minimum wage
- Financial regulation
- Immigration
- Key aspects of energy policy, including North Sea revenues, generation and supply of electricity, offshore exploration and extraction
- Trade and industry, including company law, competition and consumer protection some aspects of transport, including international air connectivity
- Employment legislation and industrial relations
- Broadcasting and media
- Telecommunications regulation

2.28 Any areas not explicitly stated as reserved in legislation are devolved to the Scottish Parliament. The following list is not exhaustive, but for example the Scottish Parliament is responsible for:

- Health
- Education
- Justice
- Social care
- Aspects of Social Security
- Housing
- Environment protection
- Transport

2.29 The devolution arrangements protect the Scottish Budget from some of the long-term spending challenges related to an ageing population, such as pension costs. The state pension is administered by the Department for Work and Pensions (DWP) and funded through UK Government Annually Managed Expenditure (AME). Scottish NHS and teachers pensions are

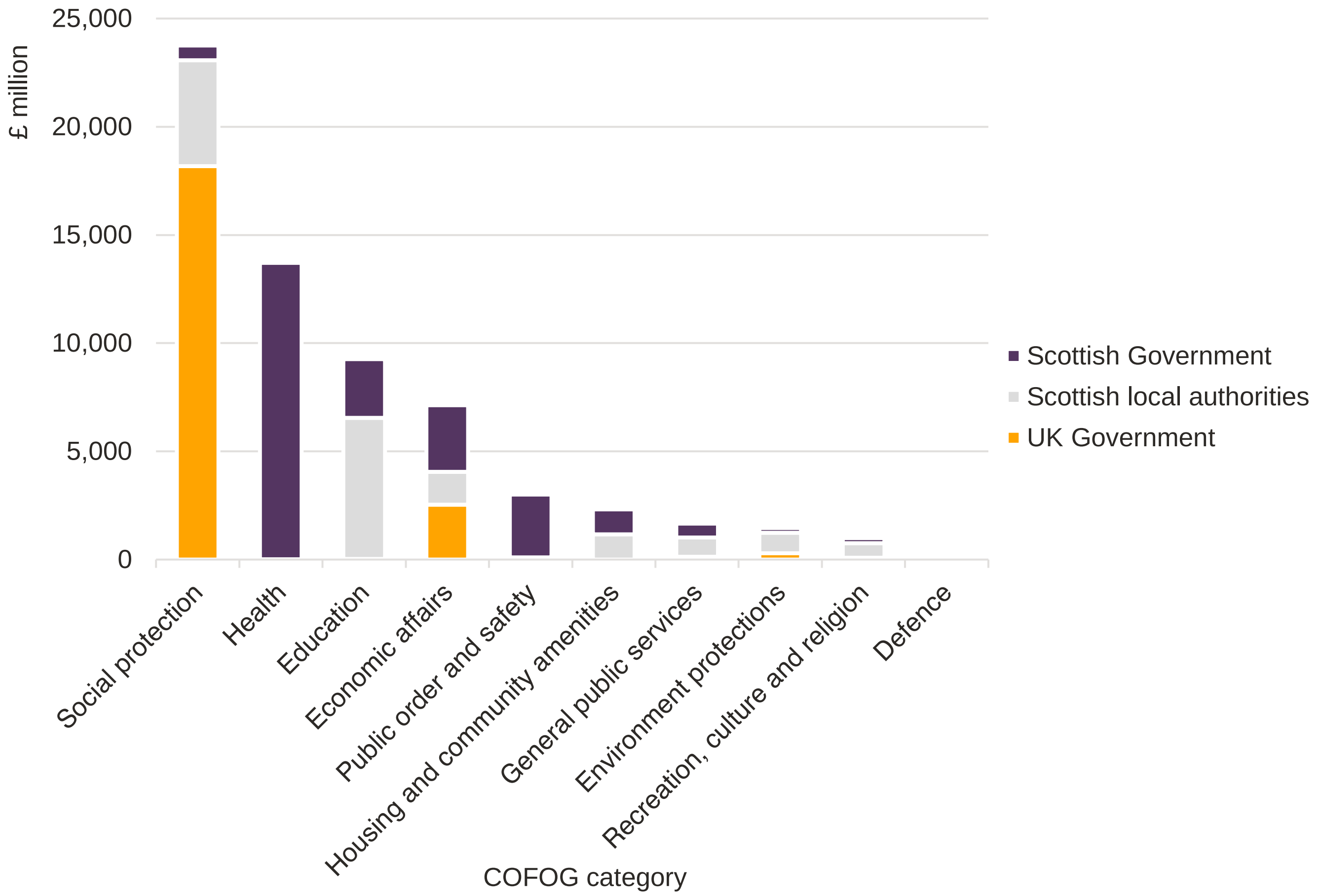
[28] Schedule 5 of the Scotland Act 1998 sets out the areas which are reserved to the UK Government. This schedule has been updated with the new devolved powers of the Scotland Acts of 2012 and 2016. Any area not explicitly mentioned in this schedule falls under devolved responsibility.
[29] Scottish Government (2022) Independence in the modern world. Wealthier, happier, fairer: why not Scotland? (link)

included in the Scottish Budget but funded through UK Government AME, we discuss these further in the **UK-funded Annually Managed Expenditure section** of this chapter. The only public pension schemes which the Scottish Government is responsible for funding are those for Scottish firefighters and police officers.

2.30 In addition to the devolved-reserved split, many areas devolved to the Scottish Parliament are in turn delegated to local government. For example, local authorities have a mandatory duty to provide schooling for 5 to 16 year-olds and social work services for older people, vulnerable children, and adults. Spending on these areas is met from local authority funding. Local authorities can also spend on economic development and recreation services.[30] This means that two layers of government are responsible for devolved spending: local authorities in Scotland and the Scottish Government.

2.31 The split of spending by layer of government is complex. Figure 2.5 shows, based on 2019-20 figures, the make-up of spending by layer of government for spending using the Classification of Functions of Government (COFOG) categorisation.[31,32]

Figure 2.5: Government spending in Scotland by function and layer of government in 2019-20



Source: Scottish Fiscal Commission, HM Treasury (2021) Country and Regional Analysis: 2021 (link).

2.32 Figure 2.6 shows devolved spending per head in 2019-20, broken down by COFOG. This is the last year before public spending amounts and proportions were distorted by the COVID-19 pandemic.

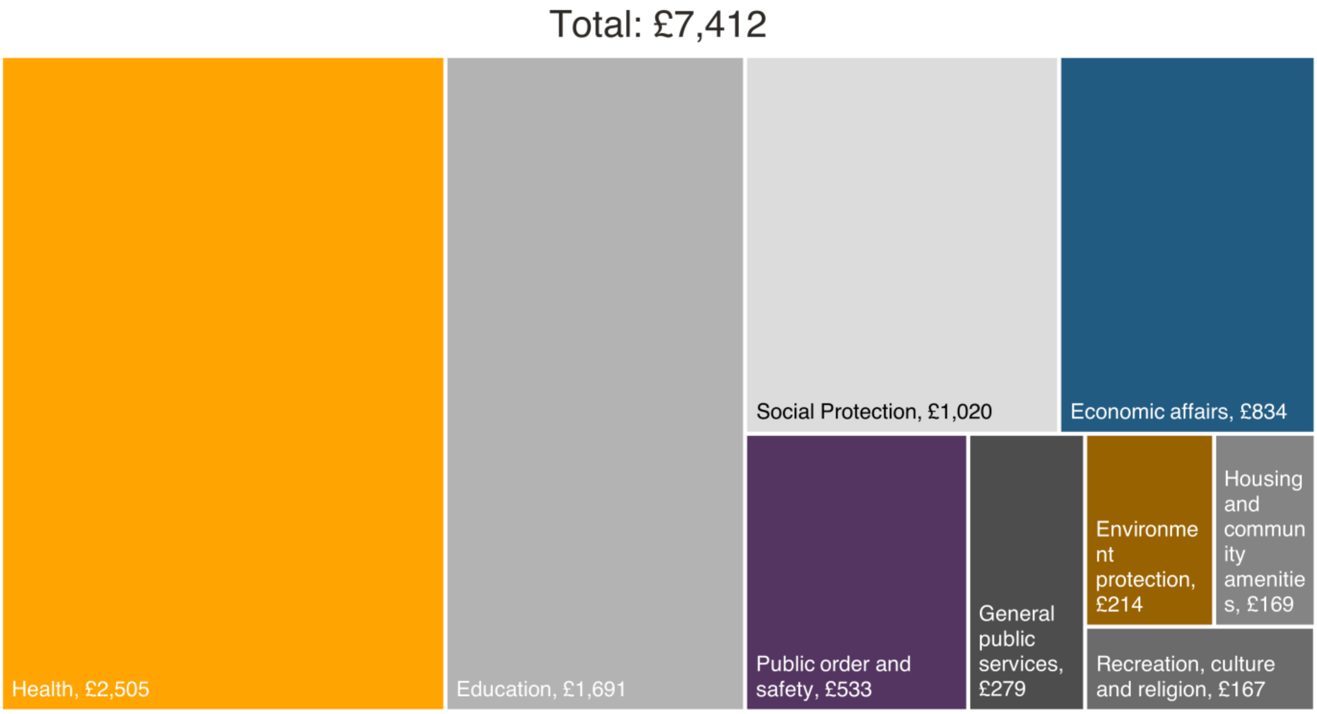
[30] Scottish Government (2017) Local authorities: factsheet (link)

[31] The Classification of the Functions of Government (COFOG) was developed by the OECD and classifies government expenditure data from the System of National Accounts by the purpose for which the funds are used such as health or education. It allows spending to be compared internationally and over time when government spending departments may change.

[32] ONS (2021) Country and Regional Analysis (link)

The responsibilities devolved to the Scottish Parliament with the highest levels of spending are health, education, social protection (which includes social care, housing support, and devolved social security), economic affairs (which includes transport and agriculture, fisheries and forestry) and public order and safety (which includes police, fire services, prisons, and law courts).

Figure 2.6: Scottish Government and local authority spend per person in 2019-20



Source: Scottish Fiscal Commission, HM Treasury (2021) Country and Regional Analysis: 2021 (link), ONS (2021) Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2020 (link).

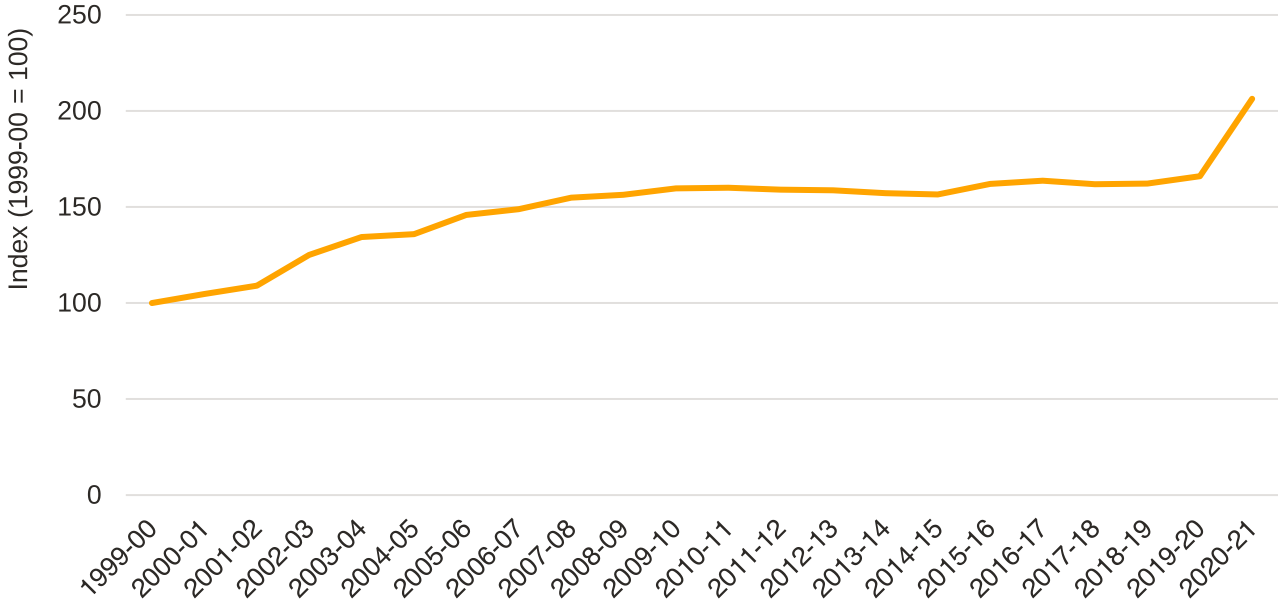
Health spending

2.33 Health is the largest component of the Scottish Budget. In 2022-23 the resource funding allocated to the Health and Social Care portfolio was £17,106 million, 41 per cent of the total resource budget available.[33]

2.34 Health spending has increased in the first decade of the 2000s. As shown in Figure 2.7, by 2009-10 the Scottish Government was spending 60 per cent more on health per person than in 1999-00. From 2010 to 2015, the period covered by the UK Spending Review 2010, health spending per person remained more or less constant in real terms. From 2015-16, health spending began to increase again, although more modestly, so that by 2019-20 it was 3.8 per cent higher than it had been eleven years before. In 2020-21 health spending increased significantly, coinciding with the COVID-19 pandemic.

[33] Scottish Government (2022) Investing in Scotland's Future: Resource Spending Review (link). Figure is excluding non-cash funding, which is ring-fenced for accounting adjustments and so does not reflect real spending power.

Figure 2.7: Real health spending by Scottish Government per person, 1999-00 to 2020-21



Source: Scottish Fiscal Commission, Scottish Fiscal Commission, HM Treasury (2021) Country and Regional Analysis: 2021 (link), ONS (2021) Population estimates for Scotland: mid-2020 (link), HM Treasury (2022) GDP deflators at market prices, and money GDP June 2022 (Quarterly National Accounts) (link).

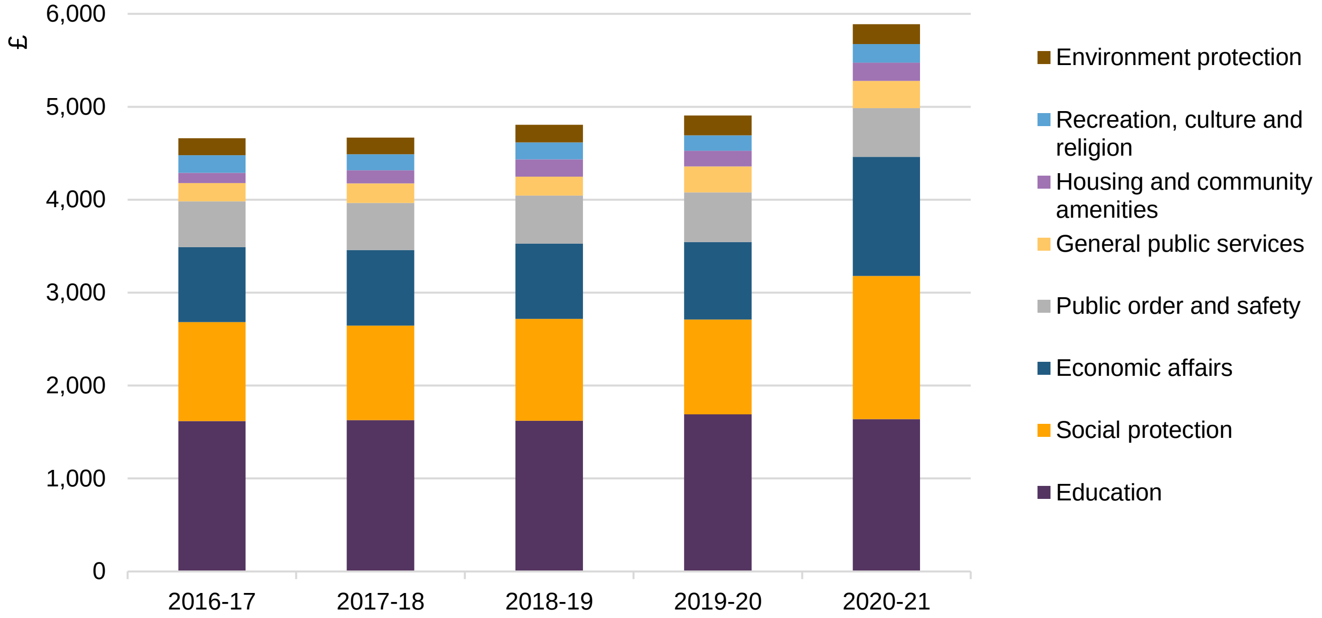
Spending on other functions

2.35 From 2016-17 to 2019-20 real terms spending per head by the Scottish Government and local authorities was broadly flat for most functions of government other than health, as shown in Figure 2.8. Spending on housing and community amenities was the only area which increased consistently.

2.36 In 2020-21 spending increased substantially not only on health, as we saw earlier, but also on social protection and economic affairs. Overall, public spending on services in Scotland by local and Scottish Governments increased by almost 26 per cent, from £40,496 million in 2019-20 to £50,982 million in 2020-21.[34] The increase was the direct result of the COVID-19 pandemic as well as the devolution of nearly £3 billion of social security payments from April 2020.

[34] HM Treasury (2021) Country and Regional Analysis: 2021 (link)

Figure 2.8: Scottish and local government real spending per person (excluding health and defence) [1]



Source: Scottish Fiscal Commission, Scottish Fiscal Commission, HM Treasury (2021) Country and Regional Analysis: 2021 (link), ONS (2021) Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2020 (link), HM Treasury (2022) GDP deflators at market prices, and money GDP June 2022 (Quarterly National Accounts) (link).
[1] Health is excluded as it is shown in Figure 2.7. Defence is excluded as it is less than £1 million in all years.

Social Security spending and funding

Overview

2.37 The Scotland Act 2016 devolved of a range of social security payments to the Scottish Parliament, mainly related to disability and caring. The first payment devolved was Carer's Allowance in 2018-19. The majority of other payments were devolved from April 2020.

2.38 The fiscal framework agreement between the UK and Scottish Governments sets out how the Block Grant is adjusted to reflect the social security payments now funded by the Scottish Government.[35] These adjustments are called BGAs.

Social Security spending

2.39 Social security accounts for an increasingly large share of the Scottish Budget. In 2022-23 social security is forecast to account for 10 per cent of the Scottish Government's resource budget, increasing to 14 per cent in 2026-27.[36] The Scottish Government has introduced significant reforms to delivering social security in Scotland. Existing payments administered by the DWP on behalf of the Scottish Government are being replaced by new payments administered by Social Security Scotland. In total we forecast spending on 17 different social security payments. For more detail and our medium-term forecasts on social security spending, see 'Scotland's Economic and Fiscal Forecasts'.[37]

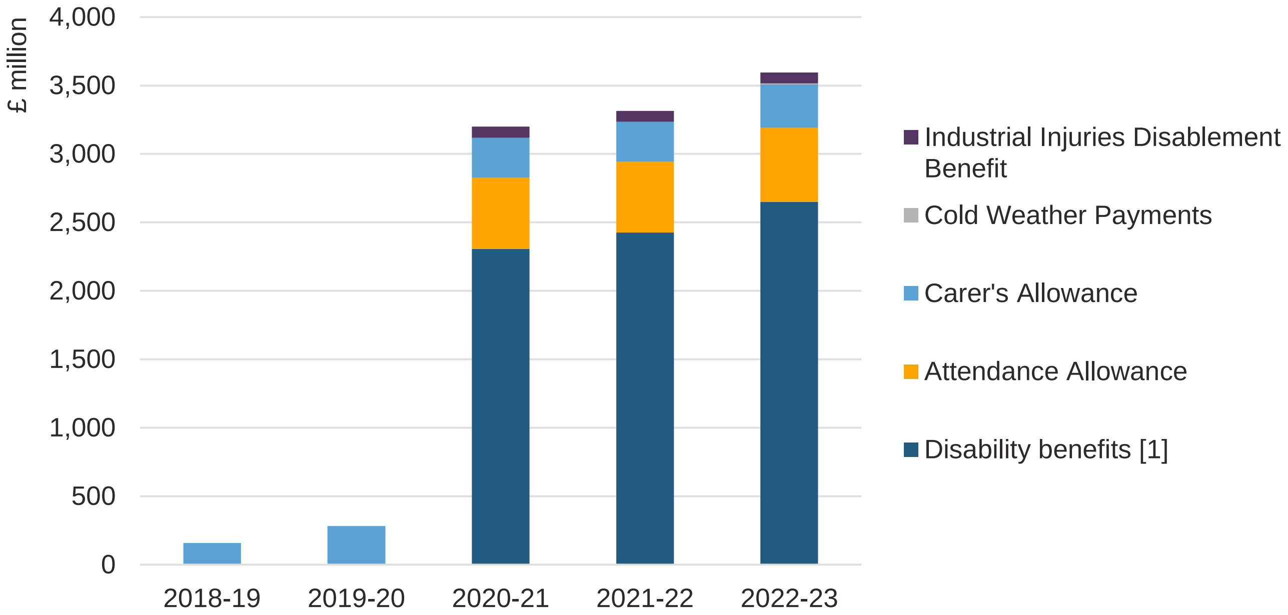
[35] The agreement between the Scottish Government and the United Kingdom Government on the Scottish Government's fiscal framework (2016) (link)
[36] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – May 2022 (link)
[37] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – May 2022 (link)

Block Grant Adjustments

2.40 Social security is funded differently to other parts of the Scottish Budget. The Scottish Government receives BGAs from the UK Government for taking on the payment of devolved benefits but these are based on the UK payments they replace and do not include the effect of Scottish Government reforms. Figure 2.9 shows how the Social Security BGAs have evolved since the outset of social security devolution, the large increase in 2020-21 reflects the devolution of most social security spending in this year.

2.41 Any spending above the funding received through the BGAs must be met by the Scottish Government from its wider Budget. The net position, the difference between our forecasts of devolved social security payments and the BGAs, is forecast to be increasingly negative. The Scottish Government has introduced new payments which are only available in Scotland, and these must be entirely funded from the Scottish Budget. The difference between the funding received through the BGAs and our forecast for social security payments with an associated BGA, plus the spending on new unique Scottish payments represents the amount the Scottish Government must fund from the wider Scottish Budget. Our May 2021 paper 'Funding for the Scottish Budget' detailed how BGAs are indexed to changes in the corresponding payments in the rest of the UK.[38]

Figure 2.9: Devolved social security Block Grant Adjustment funding



Source: Scottish Fiscal Commission, HM Treasury (2021) Block Grant Transparency: December 2021 (link).
[1] Includes Personal Independence Payment (PIP) and Disability Living Allowance (DLA).

UK-funded Annually Managed Expenditure

2.42 The Scottish Government has some areas of spending which qualify as AME and are fully funded by the UK Government. This spending is included within the devolved spending figures of earlier sections.

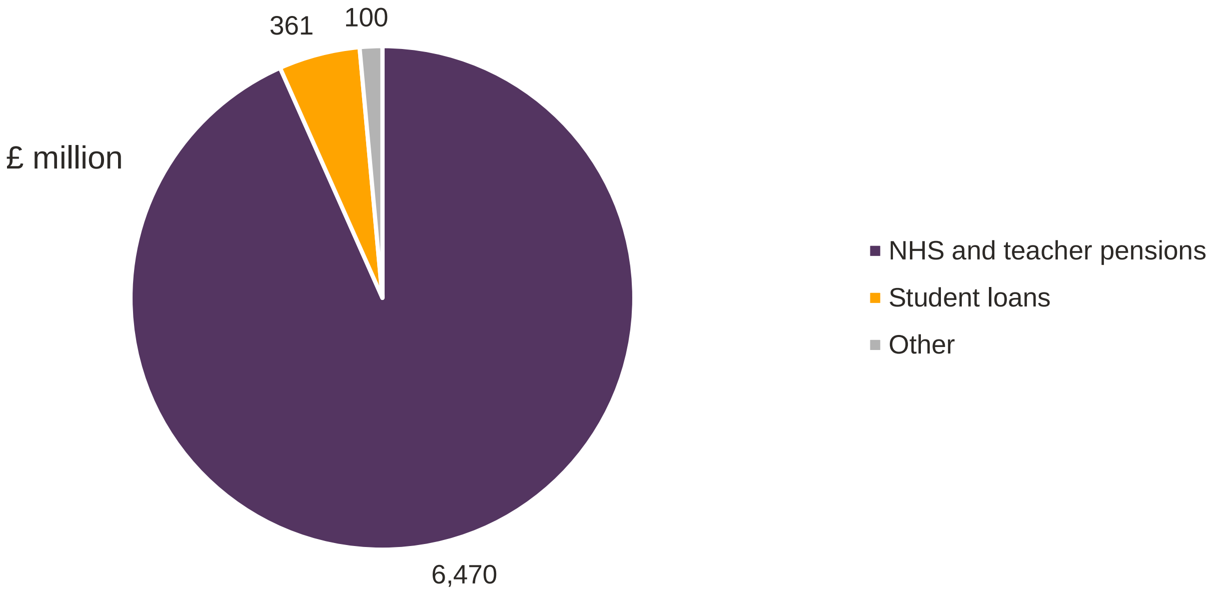
2.43 HMT defines AME as expenditure which, due to scale, unpredictability or demand dependency, is more difficult to control.[39] Examples of UK Government AME spending are the State Pension, Universal Credit or sovereign debt repayments. Because these are either demand-led or long-term

[38] Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link)
[39] UK Government (2013) How to understand public sector spending (link)

commitments, Spending Reviews do not set limits on AME spend, and instead focus on Departmental Expenditure Limits (DEL).

2.44 Most of the funding to Scottish Government from HMT is managed like DEL. Some Scottish Government spending qualifies as AME and is funded directly by the UK Government. In the 2022-23 Budget AME was forecast to be £6,932 million, with the majority of spending on pensions as shown in Figure 2.10.[40]

Figure 2.10: UK Government funded Annually Managed Expenditure in the 2022-23 Scottish Budget



Source: Scottish Fiscal Commission, Scottish Government (2022) Scottish Budget 2022 to 2023 (link).

2.45 While Scottish Government AME is significant, it is not a sustainability risk for the Scottish Budget because it is directly funded by the UK Government.

[40] Scottish Government (2021) Scottish Budget 2022 to 2022-23 (link)

Chapter 3
Fiscal sustainability report methodology

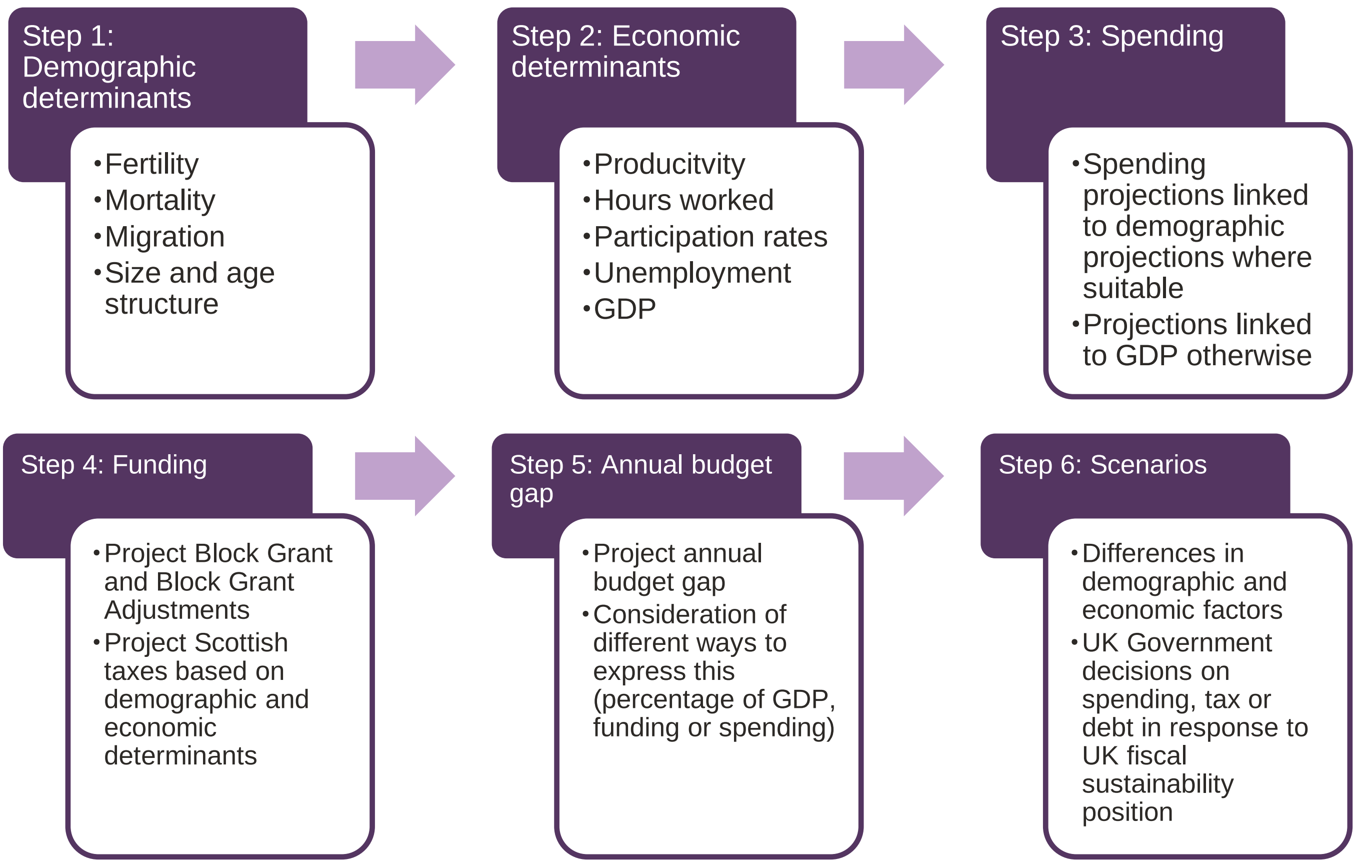
Overview

Introduction

3.1 Here we set out our planned methodology for projecting Scotland's population, economy, funding and spending over the long-run period of fifty years. We explain the assumptions, techniques and data sources that we propose using.

3.2 Figure 3.1 sets out our methodological approach. This Chapter discusses our assumptions for projecting the demographic and economic trends and for our funding and spending projections. We discuss the projection of the annual budget gap and different scenarios for stress tests in **Chapter 4**.

Figure 3.1: Methodological approach for assessing Scottish Government fiscal sustainability



Source: Scottish Fiscal Commission

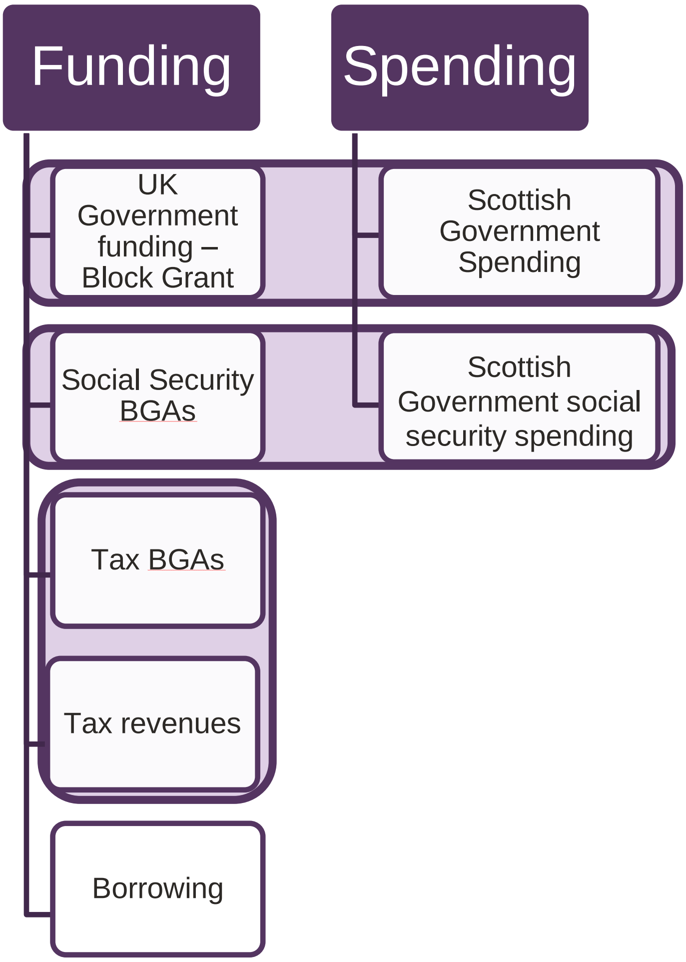
3.3 As the Scottish Budget depends on UK Government funding, it is important we account for future UK Government spending and revenues in our assessment of the Scottish Government's fiscal sustainability. We plan to take the most recent Office for Budget Responsibility (OBR) report which contains fifty-year economic and fiscal projections for the UK Government as a basis for projecting

UK Government funding. For this reason consistency with the OBR's approach is an important factor in how we plan to project each part of the Scottish Government's finances.

3.4 Figure 3.2 sets out in more detail the components of Scottish Government funding and spending that we will consider in our Fiscal Sustainability Report (FSR). For areas linked together in the purple boxes, we need to assess the consistency in our assumptions and methodologies.

3.5 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 net tax 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 3.2: Components of Scottish Government fiscal sustainability



Source: Scottish Fiscal Commission

Demographic and economic determinants

Overview

3.6 Alongside this paper we published 'Trends in Scotland's population and effects on the economy and income tax'.[41] This includes demographic projections made based on these assumptions and discusses how these affect economic growth. That paper illustrates how demographic and economic factors have affected the income tax net position.

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

3.7 This section discusses the assumptions used for the projections of the population and the economic determinants of Gross Domestic Product (GDP). We outline our rationale for these assumptions and discuss the implications.

Population projection

Assumptions used in our population projection

3.8 The ONS usually produce a range of population projection variants based on different assumptions for fertility, mortality and migration rates. The Office for National Statistics (ONS) have so far only provided a principal projection based on the population estimate for 2020 without other variants. The principal projection is based on their central estimate for each underlying assumption.

3.9 We intend to use our own variant of this 2020-based projection. This variant uses the same central assumptions for fertility, mortality and within the UK migration as used in the ONS principal projection for 2020, but in line with the OBR's recent projections we have created a variant with "low international migration".

3.10 This variant uses a 'zero per cent net European Union (EU) migration' assumption for international net migration instead of the principal net international migration assumption.[42] It is adapted from the ONS "0% EU migration" assumption included in their 2018-based population projections.[43] This assumption is distinct from the ONS "low migration" assumption used for previous ONS population projections.

3.11 This assumption, and the variant population projection it contributes to, takes the average rate of net migration from the EU to Scotland in the three years prior to 2018 and subtracts this from the total net international migration figure used in the principal projection. In short, it assumes no net migration from the EU over the course of our projection period.

Our rationale for using these assumptions

3.12 We intend to use the ONS principal projections for fertility, mortality and within UK migration with assumed lower international migration as we consider these the reasonable and likely basis for long-term population change. These assumptions also broadly mirror the OBR's assumptions for their July 2022 Fiscal Risks and Sustainability Report.[44]

3.13 Using the same assumptions as the OBR has the benefit of allowing us to make a direct comparison between Scotland and the UK as a whole. This applies to demographics as well as the economic projections and assessments of fiscal sustainability that these projections will contribute to.

3.14 For example, the OBR's population projections feed through into their economic and spend projections which we then use for our Block Grant and BGA projections. If we were to base our projections on different assumptions to those used by the OBR, different assumptions would be

[42] Scottish Fiscal Commission modelling, ONS (2022) National population projections, migration assumptions: 2020-based interim (cross-border) (link) and 2018-based user-requested (international), ONS (2022) National population projections, mortality assumptions: 2020-based interim (link), ONS (2022) National population projections, fertility assumptions 2020-based interim (link), ONS 2020-based interim principal projection (link)

[43] This 2018-based variant projection was user requested and does not constitute national statistics. Outflows by EU (excluding British) and non-EU citizens were calculated using international migration estimates for year-ending mid-2016 to year-ending mid-2018. Depending on the variant, the average EU migration flows were removed (0% future EU migration variant) or reduced by half (50% future EU migration variant) and the percentage changes from the original total migration estimates were calculated. This was done for both inflows and outflows: for example, the 50% future EU migration variant reduced both EU inflow and outflows by half. The assumed remaining flows (British and non-EU citizens) were unchanged. More information is available at ONS (2019) 0% future EU migration variant – October 2019 (link)

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

applied to our funding and spend projections. We would require strong evidence to take such a step; otherwise, we would be at risk of introducing artificial methodological differences between our work and that of the OBR.

Consistency with the OBR

3.15 This population projection is on the same basis as used in our medium-term forecasts of the Scottish economy published in Scotland's Economic and Fiscal Forecasts (SEFF), and used by the OBR in their recent publications.[45,46]

3.16 Though the OBR use the same assumption basis for the UK as we will use for Scotland, this does not mean that the rates of fertility, mortality and migration used in the projection for the UK are applied to Scotland. The projection model takes into account existing differences between Scotland and other parts of the UK, and projects these into the future based on our chosen assumptions.

3.17 There are, however, a number of minor differences between our projections and those used by the OBR in the short and medium term. For example, the OBR assume that international migration was slightly negative for 2020-21. We have assumed it was zero in Scotland.

Economic determinant assumptions

How we project GDP in the long term

3.18 Our long-term projection of economic output, or trend GDP, is based on the amount of goods and services that the economy can produce without inducing inflationary pressure in the economy. Our approach is consistent with that used by the OBR.

3.19 We project long-term GDP by multiplying the population aged 16 years and older, the labour force participation rate, equilibrium employment, average hours worked and labour productivity. This process is illustrated in Figure 3.3.

Figure 3.3: Schematic representation of long-term GDP projection

Source: Scottish Fiscal Commission

3.20 Our projection relies on underlying estimates of each component of this equation. We discuss the assumptions for the population in the **Population Projection Section** and set out the rationale for each of the economic determinants below.

3.21 We use broadly the same assumptions for each of economic determinants as the OBR use for their UK long-term projections. The same assumptions do not produce the same projections as these reflect existing differences in levels of labour force participation, productivity, average hours worked, the equilibrium rate of employment and the total population.

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45 Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – May 2022 (link)
46 OBR (2022) Economic and fiscal outlook – March 2022 (link)

Labour productivity

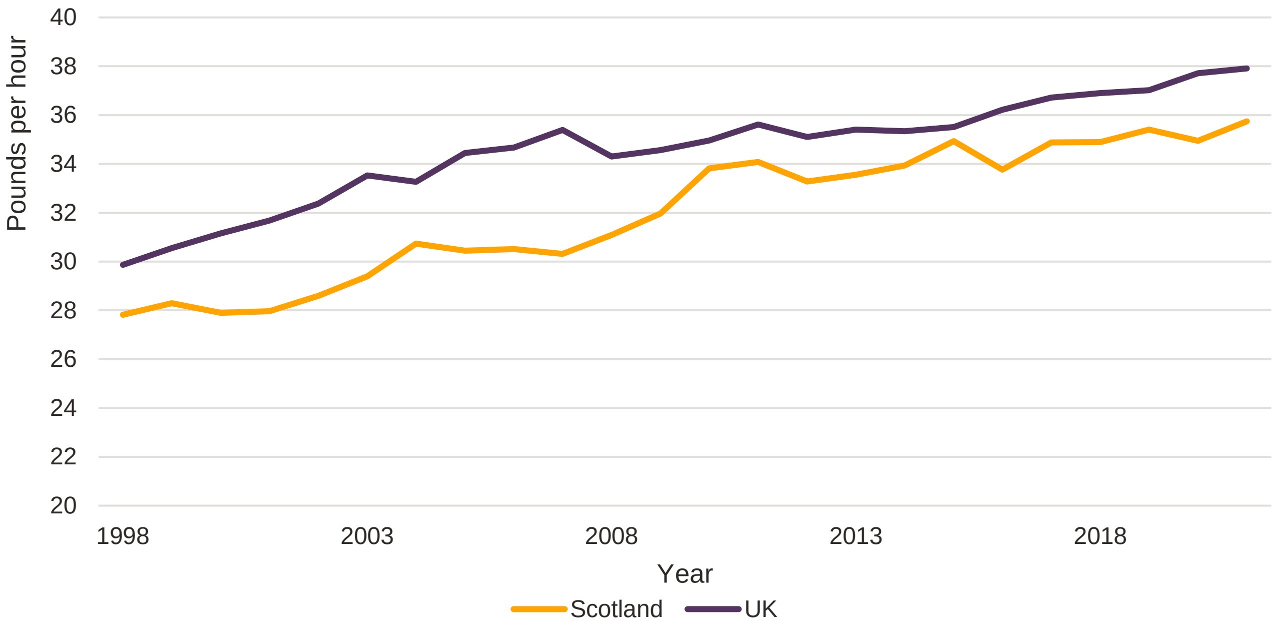
3.22 Labour productivity is the amount of goods and services produced for an hour of labour input. It is driven by technological advancement along with improvements in working practices and human and physical capital.

3.23 In the short term, we expect productivity to grow more slowly in Scotland compared with that forecast by the OBR for the UK as a whole. Further information can be found in our May 2022 SEFF report.[47] In the long term, our projections are based on Scotland's labour productivity growth being the same as the OBR project for the UK.

3.24 While we will grow productivity at the same rate in the long term, existing differences in levels of productivity, along with differences in the rates of growth we expect in the short term, will carry over into our long-term projection. That means that the productivity level in Scotland continues to be lower than the UK at the conclusion of our projection period in 2072.

3.25 From 1998 to 2021, productivity in Scotland and the UK has grown on average by around 1 per cent per year, as shown in Figure 3.4. In that period, there have been some short-term differences but overall Scottish and UK productivity growth are in line with each other.

Figure 3.4: Scotland and UK Labour productivity, Gross Value Added in constant prices (2019 base year) per hour worked



Source: Scottish Fiscal Commission, Scottish Government (2022) Labour productivity statistics: 2021 Quarter 4 (link), ONS (2022) Output per hour worked, UK release 7 July 2022 (link).

3.26 The OBR project that productivity will grow by 1.5 per cent per year in the long term. This is lower than they have previously assumed, reflecting low levels of productivity growth in the last two decades. They also assume that the UK's withdrawal from the EU will reduce productivity growth over time, and slightly lower annual expected growth by 0.1 percentage points, to 1.4 per cent, for the initial part of the projection period to 2035-36. We have mirrored this assumption to produce our projections.

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

Participation rates

3.27 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 primarily influenced by the age structure of the population, with older and younger people less likely to participate in the labour force.

3.28 We assume that age specific participation rates will be constant in line with the end point of our medium-term forecast in 2027-28. Our medium-term forecast uses Scotland-specific participation rates as its starting point and we source this data from the Labour Force Survey (LFS).[48]

3.29 The overall participation rate will change in line with the changing age structure of the population, for instance as older people are more likely to be retired, we would expect a reduction in the overall participation rate with population ageing.

3.30 We expect the interaction between participation rates and our population projection to be a determinant of differences in rates of economic growth between Scotland and the UK over the next fifty years.

Average hours worked

3.31 We will hold the 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 in Scotland. This data is also sourced from the LFS.[49]

3.32 This is consistent with the OBR's approach, though the average hours worked in Scotland is slightly less than that in the UK where it is 32 hours. We do not expect this to have a material effect on economic growth.

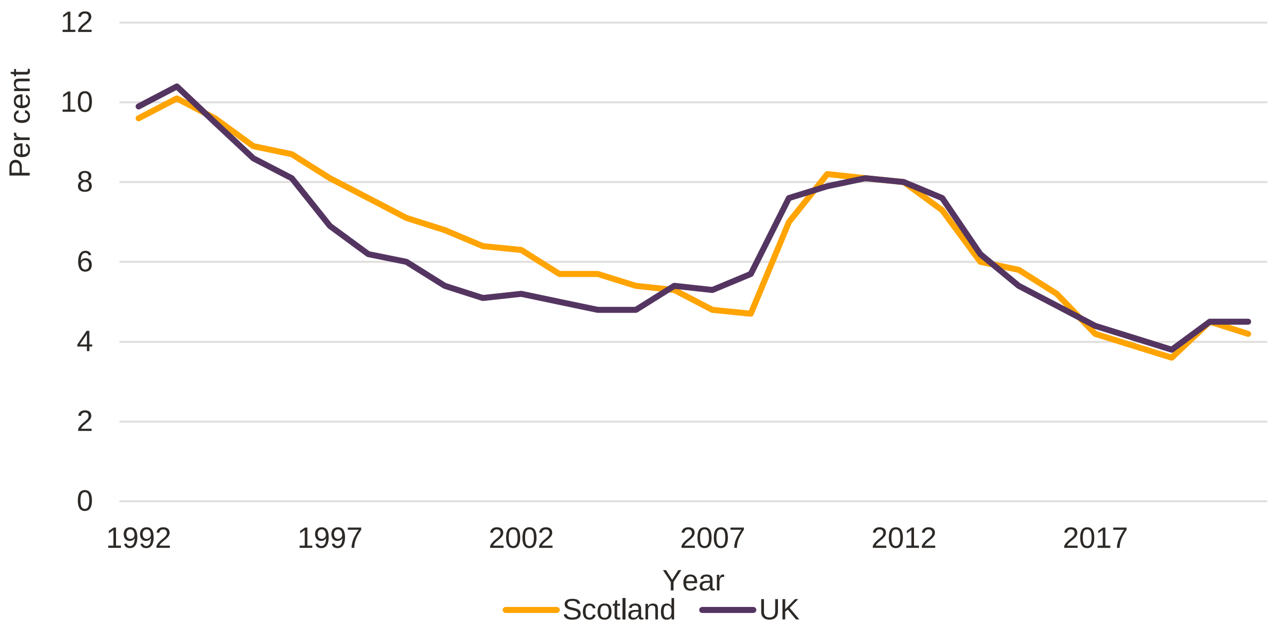
3.33 Unlike participation rates, our GDP projection model does not take into account age or gender specific average hours worked. That means that Scotland's changing age structure does not affect the projection of average hours worked.

Equilibrium rate of employment

3.34 In the long term, we use an assumed steady state of unemployment and use this to project the equilibrium rate of employment. Scotland's rate of unemployment has broadly tracked that of the UK since 1992, and closely matched it since 2010 as shown in Figure 3.5. For the purposes of these projections we have mirrored the OBR's assumption on the UK unemployment rate and held this constant for the whole projection period. We assume that unemployment will be around 4 per cent over the course of our projection period.

[48] ONS (2022) LFS: Economic activity rate (by age and gender), July 2022 (link)
[49] ONS (2022) LFS: Average actual weekly hours of work (link)

Figure 3.5: Scotland and UK unemployment rates, 1992 to 2021



Source: Scottish Fiscal Commission, ONS (2022) LFS: Unemployment rate (aged 16 and over, seasonally adjusted):% (link), ONS (2022) LFS: ILO unemployment rate: Scotland: All: %: SA (link).

Block Grant funding

Overview

3.35 As we set out in **Chapter 2**, Block Grant funding is a key determinant of the Scottish Government's funding envelope. To understand Scottish fiscal sustainability, we will need to understand how UK Government funding will affect the Block Grant over time. This section outlines the steps we will take to project the Barnett determined Block Grant, describes the data we intend to use and our next steps. We set out specific consultation questions in **Chapter 5**, but we invite readers to feedback on any part of our proposed methodology.

3.36 To understand how the Block Grant will change over the long run, we need to estimate how UK Government spending will change. We begin by projecting UK Government spending plans in devolved areas; using the OBR projections of UK-wide long-run spending and matching these to UK Government spending in devolved areas. We then apply the comparability factors and Scottish population share to estimate the Barnett consequentials, which can then be added onto the previous year's Block Grant to produce a final projection.

3.37 The Block Grant is determined by UK Government Departmental Expenditure Limits (DEL). OBR projections are by total resource and capital Total Managed Expenditure (TME) across UK-wide spending, which encompasses DEL and Annually Managed Expenditure (AME). This means that we will need to make our own assumptions around how this spending will split between departments, resource and capital, and DEL and AME as OBR does not need to include this level of detail in their projections.

3.38 In this section, we set out each part of our plans to model the Block Grant in detail. We first set out how we will estimate Block Grant funding using the OBR's five-year forecasts. We then explain how we will project the funding using OBR projections of UK-wide spending. Finally, we explain how we will project non-Block Grant funding.

UK Government five-year spending forecasts

Summary

3.39 We will begin by projecting the UK Government spending by department to the end of the OBR's five-year forecast which would be 2027-28 based on their next forecasts, expected to be published in autumn 2022.

3.40 We project the 2021-22 UK Government outturn spending data forward to match current UK Government spending plans, as set out in their most recent Budget document. We then use the OBR's forecasts until the end of their five-year forecast horizon to understand the medium-term path of funding for the Scottish Government.

2021 UK Government Spending Review period

3.41 From the 2021 UK Spending Review and 2021 Block Grant Transparency reports, we have data on planned total UK Government spending by department, and the UK Government spending in devolved areas and resulting Barnett consequentials up to 2024-25.[50,51] We can use this alongside the Block Grant Transparency data to understand the UK Government's planned spending and Block Grant funding until 2024-25, the end of the current Spending Review period. This will form the starting point of our FSR projections.

3.42 We will keep this consistent with the forecast of the Block Grant used for our most recent SEFF forecasts. This means our funding projections will be based on the Scottish Government's most recent funding position.

OBR UK spending forecasts

3.43 We will forecast UK Government spending over the medium term using the OBR's Economic and Fiscal Outlook (EFO) forecasts to link the final year of the 2021 Spending Review to the end of their five-year horizon. The OBR publishes forecast data by the total Resource and Capital DEL across UK Government spending.[52] We are working with the OBR to understand how to best capture this by UK Government department, so that we can forecast the funding Scottish Government will receive.

3.44 To understand how spending will be split between each UK Government Department, we will use outturn UK Government spending data based on the Online System for Central Accounting and Reporting (OSCAR) dataset.

3.45 OSCAR is a database used to record spending by all Government departments, devolved administrations, and other public bodies across the UK. It includes classifications of spending by resource, capital and financial transactions, as well as by the classifications of function of government (COFOG) categories and by DEL or annually managed expenditure (AME). This makes it a good resource for our Block Grant projections, as we can convert the OBR's wider forecasts of total spending to the level which determines the Block Grant.

3.46 We plan to project the total OSCAR data forwards in line with the OBR's forecast of DEL spending, and then separate this between each UK Government department. These changes in spending by

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50 HM Treasury (2021) Autumn Budget and Spending Review 2021 (link)
51 HM Treasury (2021) Block Grant Transparency: December 2021 (link)
52 OBR (2022) Economic and Fiscal Outlook – March 2022 (link)

department can then be applied to the Barnett formula, to forecast the change in the Scottish Government's Block Grant as a result of these forecasts of UK Government spending.

UK Government long-run spending projections

Summary

3.47 For their FSR, the OBR produce a projection of total UK-wide spending that they use to estimate the UK Government's resulting deficit and debt path. They apply demographic projections to health, education, pensions and social security spending and assume that other areas of spending will grow in line with UK GDP. The OBR use these fifty-year projections to assess the sustainability of the UK's finances.

3.48 We plan to use OSCAR data to split these projections to reflect the spending plans across all administrations, using outturn spending data. This will give us the basis to understand how UK Government spending plans will affect the Scottish Government's Block Grant over the long-run.

Estimating projected spending by department

3.49 OBR's FSR projections are based on UK-wide TME, split into different service areas such as health, education, or pensions because their purpose is to assess the debt stock across the whole UK. This TME includes both fixed DEL spending and AME spending for UK Government Departments, Devolved Administrations and local authorities.

3.50 For the Block Grant, what matters is fixed DEL funding for each UK Government department. To project the Block Grant, we need to model how this broader UK-wide Government spending will separate between different departments and levels of Government.

3.51 The OSCAR data is our key resource for separating OBR's TME projections into the DEL by Department. There are two steps to this process.

3.52 First, we plan to separate out the total spending in each COFOG category by each Government department. The Public Expenditure Statistical Analyses (PESA) report contains tables which separate out spending on public services by COFOG classifications, based on the OSCAR data. We will use the OSCAR data to estimate how the OBR's spending projections by COFOG reflect each UK Government department.

3.53 The second step is to use the OSCAR data to determine the DEL and AME spending in each department. This dataset gives us a lot of detail about the different ways each department covers spending. It is this detail that will allow us to accurately project how the spending could split across both DEL and AME, and the Resource, Capital and Financial Transactions areas of the Block Grant. This means we will be able to estimate each area of funding for the Scottish Government, and understand how their sustainability in each area will shift over time.

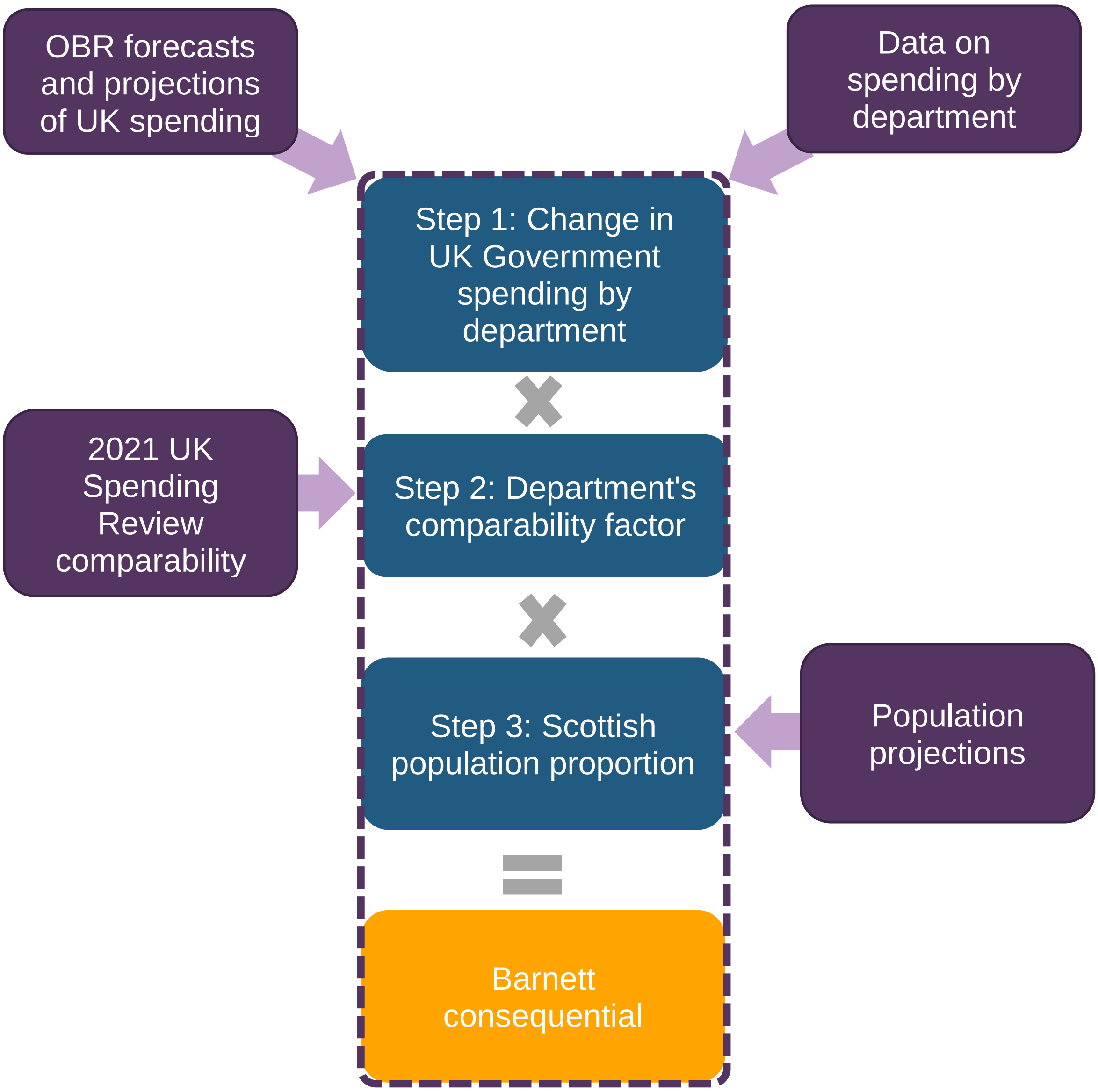
3.54 For our central case, we will assume that the split between different departments is consistent with the spending set out in the 2023-24 UK Budget.

Calculating the Block Grant

3.55 Once we have projected the UK Government spending by department, we need to apply the population shares and comparability factors to estimate the Barnett consequentials each year of the forecast.

3.56 We show a high-level outline of how we will structure the model in Figure 3.6. For each year, we estimate the Barnett funding the Scottish Government will receive based on OBR projections of UK Government spending. We will then add these consequentials to the previous year's Block Grant to project the Block Grant funding that Scottish Government will receive.

Figure 3.6: High-level Barnett consequential model structure



Source: Scottish Fiscal Commission

3.57 The Barnett formula is applied to the changes by each UK Government department on the previous year's spending. The Barnett consequential resulting from this change in spending is then added on to the previous years' Block Grant, to determine the Scottish Government's Block Grant funding for each year.

Comparability factors

3.58 As set out in **Chapter 2**, comparability factors are determined for each department based on its responsibilities, and the share of spending that matches devolved areas.

3.59 The comparability factors are determined for each department based on its responsibilities and its share of spending in devolved areas. The factors are based on UK Government spending in the year prior to the start of any spending review.

3.60 OBR long-run projections include an assumption that UK Government spending will be consistent with its current plans. This implies that there are no plans to rearrange UK Government department responsibilities. However, we plan to assume the shares of spending in each department will likely change over time, as areas influenced by demographics become a larger share of spending. We will account for how spending in each department will change, and so how the comparability factor funding will shift over time.

Scotland's share of UK population

3.61 The final component to calculate the Block Grant is Scotland's population proportion over time. Typically, these are updated for each UK Government Spending Review based on the ONS mid-year population estimates. Figure 2.3 in **Chapter 2** shows the current population estimates used in the 2021 UK Spending Review.

3.62 Based on OBR UK population projections, we will project the populations for each area of the UK over the fifty-year horizon. We set out our projections of the Scottish population in 'Trends in Scotland's population and effects on the economy and income tax'[53] and describe the assumptions in the **Population Projection Section** of this chapter.

3.63 We will use these projections to project Scotland's population proportion over time. As Scotland's population changes relative to the rest of the UK, this will affect the funding the Scottish Government receives through the Block Grant. We plan to account for this in assessing how Scottish Government funding compares to spending, which will be similarly influenced by population changes.

3.64 In **Chapter 5**, we invite any feedback or suggestions of other data sources to consider to better understand and project the Scottish Block Grant.

Non-Barnett funding

3.65 The Block Grant to the Scottish Government includes funding which is not determined through the Barnett formula. This includes ring-fenced fundi ng for City and Growth Deals, and Agriculture and Fisheries funding, and other support schemes to the Scottish Government.[54] For all other areas of non-Barnett funding, we assume that these will grow with UK GDP beyond the OBR's forecast horizon.

Tax revenues and Block Grant Adjustments

Overall approach

3.66 Tax revenue and the tax BGAs are a key factor in determining how sustainable the Scottish Government's public finances are. We plan to project Scotland's BGAs consistently with the assumptions we make to projection tax revenue to ensure we do not build in an artificial net position due to methodological differences.

3.67 For our SEFF reports, we produce detailed forecasts of each devolved tax for Scotland. For this report, we plan to take a less detailed approach based on trends for each tax. What is important

[53] Scottish Fiscal Commission (2022) Trends in Scotland's population and effects on the economy and income tax (link)
[54] HM Treasury (2021) Statement of Funding Policy: funding the Scottish Government, Welsh Government and Northern Ireland Executive – October 2021 (link)

here is not the details of each tax, but how broad differences between tax revenues and BGAs will affect the Scottish Budget and overall fiscal sustainability.

3.68 In this section, we set out our approach to producing projections for the long term. We show our main assumptions in Figure 3.7. For more detail on how we forecast Scottish tax revenues, see our May 2021 papers 'How we forecast income tax' and 'How we forecast devolved taxes'.[55,56]

Figure 3.7: Summary of assumptions around tax revenues for our Fiscal Sustainability Report projections

Tax	Assumptions
Income tax	• Rates and bands to grow in line with average earnings.
Non-Domestic Rates (NDR)	• NDR revenues to grow in line with GDP • NDR Pool used to smooth revaluation cycles so that Distributable Amount is consistent over time
Land and Buildings Transaction Tax	• Tax thresholds to grow in line with property prices. • Residential transactions are determined by population growth.
Scottish Landfill Tax	• All incineration assumed constant as a share of total waste from final forecast year onward.

Source: Scottish Fiscal Commission

3.69 We are responsible for forecasting devolved tax revenues in Scotland. The OBR are responsible for forecasting UK Government tax revenues which HMT use to calculate the BGAs. For our FSR, we will produce projections of the BGAs for the first time.

3.70 In the OBR's FSR, they project tax revenues across the whole of the UK in line with population projections. This is what matters for understanding the UK Government fiscal position and debt-to-GDP ratio over time. The OBR do not consider how taxes will grow between different regions.

3.71 For our purposes, what matters is how tax revenues grow in Scotland relative to England and Northern Ireland. We do not consider Welsh tax revenues because all taxes devolved to Scotland are also devolved to Wales. This means we need to understand tax growth in each nation of the UK, and cannot use the OBR's projections of total UK tax revenues.

3.72 We will instead develop our own models for each devolved tax and the associated BGA to ensure consistency across the net tax position. This will ensure our projections are accurate and do not change the net tax position based on different assumptions in each case. We now explain how we will project each devolved tax and BGA in more detail.

Income tax

3.73 Our current forecasting approach uses the Survey of Personal Incomes dataset from HM Revenue and Customers (HMRC), to estimate how Scottish income tax will grow given forecasts for the earnings and employment determinants, and Scottish income tax rates and bands. This gives a detailed understanding of how income tax is likely to grow over the next five years. We plan to

[55] Scottish Fiscal Commission (2021) How we forecast income tax (link)
[56] Scottish Fiscal Commission (2021) How we forecast devolved taxes (link)

extend this model to give the fifty-year projections for our FSR. Here, we set out how our assumptions would need to change for these long-run projections.

3.74 In Annex B to their July 2011 FSR, the OBR discuss aligning income tax bands with their long-run earnings projections, to avoid fiscal drag creating an inflated long-run tax position.[57] We also plan to use this approach.

3.75 For our five-year forecast in the most recent SEFF, we assume that the higher and top rate thresholds will be fixed over the forecast horizon. This is because the top rate threshold has been fixed in both Scotland and the UK since 2016-17. Similarly, the higher rate threshold has risen by less than inflation in all years since 2017-18, except 2021-22. All other tax thresholds have risen in line with Consumer Price Index inflation.

3.76 If we were to hold this assumption for the FSR, it would result in fiscal drag as earnings grow leading to taxpayers moving into higher bands. This could create an overly optimistic projection of income tax revenues.

3.77 To avoid this, we plan to grow all tax thresholds in line with average earnings from the fifth year of our forecast onwards. Currently, our plan is to keep the first five years of our FSR projections in line with the five-year forecasts in most recent SEFF forecasts, and to move to our long-run assumptions from there.

3.78 Our income tax model can be extended to project the rest of UK income tax revenues. We can divide the underlying data to split out Scottish, Welsh, English and Northern Irish taxpayers, and then grow the England and Northern Ireland proportion of tax revenues in line with OBR determinants. This will make sure that our projection of the BGA is consistent with our projection of Scottish taxes, so that we are using the same basis to assess the income tax net position.

3.79 As with Scottish devolved tax rates and bands, we will grow rates and bands in England and Northern Ireland in line with earnings. This means that in both cases there will be no effect of fiscal drag, and we will assess the net tax position using projections on the same basis.

Non-Domestic Rates

3.80 Non-Domestic Rates (NDR) are paid by the owners, tenants or occupiers of business properties to local authorities. Local authorities' revenue from NDR is the Contributable Amount. It is then collected into the NDR pool by Scottish Government, and redistributed between local authorities as the Distributable Amount.

3.81 We need to project NDR revenues to understand how local authority funding will change over the long-run horizon. We set out our approach for forecasting the NDR Contributable Amount in our 2021 paper 'How we forecast devolved taxes', and set out how Scottish Government uses NDR revenues in our paper 'Funding for the Scottish Budget'.[58,59] Here we set out how we will change our assumptions to project NDR revenues, and the assumptions we will make for the NDR Distributable Amount.

3.82 To keep NDR policy consistent across our long-run projections, we plan to simplify how we project NDR revenues. Broadly, we plan to assume the NDR Distributable amount will grow in line with

[57] OBR (2011) Fiscal sustainability report – July 2011 (link)
[58] Scottish Fiscal Commission (2021) How we forecast devolved taxes (link)
[59] Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link)

GDP. Similarly, we will hold our projection for NDR reliefs in line with their current share of total NDR revenues.

3.83 We will also assume the Scottish Government use the Contributable and Distributable amount and the NDR Pool to even out local government funding across each revaluation cycle. This means that the Distributable Amount will grow in line with GDP each year, and NDR funding to local authorities will be relatively smooth over time.

3.84 The Block Grant includes a component which reduces funding to Scottish Government based on UK Government Business Rates revenue used to provide funding to local authorities in England. We plan to project Business Rates on the same basis as NDR and assume that a consistent share of Business Rates revenue is used to fund local authorities, so that the portion of the Block Grant and NDR revenues will be consistent over time.

Land and Buildings Transaction Tax

3.85 Land and Buildings Transaction Tax (LBTT) is a tax on purchases of property, equivalent to Stamp Duty prior to devolution.

3.86 We plan to simplify our approach to LBTT to avoid the effects of fiscal drag. As we set out in December 2021, fiscal drag over time could significantly increase LBTT revenues.[60] For simplicity, we will assume all thresholds will grow at the same rate as property prices. This will eliminate the effects of fiscal drag, and mean that the net LBTT position will be determined only by differences in the economies of Scotland and England and Northern Ireland going forwards.

3.87 For residential LBTT forecasts, we plan to assume that transactions will change in line with the number of households projected by National Records of Scotland (NRS), while house prices will grow in line with average incomes. For non-residential LBTT, we assume that the non-residential market will grow in line with GDP.

3.88 Similarly, we plan to project the Additional Dwelling Supplement (ADS) in line with its average share of all residential LBTT transactions. ADS transactions were 22 per cent of residential LBTT transactions in 2019-20.

3.89 In our December 2021 SEFF, we included a box setting out the effects of fiscal drag on our forecast.[61] We showed that assuming LBTT thresholds were frozen over five years raised revenues by £245 million. If thresholds instead rose in line with property prices, revenues would rise by £138 million.

3.90 Similarly to LBTT, we plan to assume that residential Stamp Duties in England and Northern Ireland will grow in line with the number of households in those regions, while non-residential Stamp Duty will grow in line with their GDP. We plan to use ONS projections of households to estimate the number of households across England and Northern Ireland. We will use our projections of Stamp Duty to estimate the LBTT BGA.

Scottish Landfill Tax

3.91 We plan to grow Scottish Landfill Tax (SLfT) revenues and the SLfT BGA in line with GDP from the final year of our medium-term forecast. This accounts for increasing landfill due to both more

[60] Scottish Fiscal Commission (2021) Scotland's Economic and Fiscal Forecasts – December 2021 (link)
[61] Scottish Fiscal Commission (2021) Scotland's Economic and Fiscal Forecasts – December 2021 (link)

business and household activity. We will assume that SLfT is not affected by demographics over time. We plan to use the same assumptions for the BGA, growing it in line with GDP.

Council Tax

3.92 It is not in our remit to forecast council tax revenues. This is because council tax is set and collected by each local authority, and does not directly feed into the Scottish Budget.

3.93 However, to assess fiscal sustainability, we may need to consider council tax revenues. The expected revenues from council tax and NDR will affect the amount of grant funding the Scottish Government gives to local authorities, if they wish to keep current spending levels over time.

3.94 Therefore, we will consider projecting council tax revenues for the FSR and will explore potential ways of doing this such as assuming that council tax revenues will grow in line with GDP.

Non-devolved taxes

3.95 Currently the Scotland Act 2016 has provisions to devolve Air Passenger Duty and Aggregates Levy to the Scottish Parliament, and for Scottish Government to be assigned a share of Value Added Tax revenues in Scotland. These provisions have not been enacted and these taxes do not currently affect the Scottish Budget. We do not plan to include projections of these tax revenues in the FSR until they are devolved.

Reconciliations

3.96 Reconciliations can pose short-term funding challenges if the reconciliation is greater than the resource borrowing limit to deal with them. As the Scottish and UK economies grow, so will devolved tax revenues, the corresponding BGAs, and potentially the size of reconciliations.

3.97 Although they may affect funding levels in the short term, reconciliations should not have a material effect on the long-term sustainability of the Scottish Government finances. What does matter for sustainability are the net positions rather than reconciliations. We do not intend to project reconciliations and we would expect that Scottish Fiscal Commission (SFC) and OBR forecast errors are zero on average over the long term.

Scottish Government spending

Overview

3.98 We describe Scottish Government's spending patterns over recent years in **Chapter 2**. We now set out how we will produce projections of Scottish Government spending for our FSR. Our projections will be based on an assumption that public services continue to be delivered in line with current trends and that additional spending increases only occur because of demographic factors and non-demographic cost pressures where appropriate.

3.99 For some areas such as health, education and social protection including social security, we assume that changes in spending will be broadly determined by changes in the population. This approach is in line with the OBR and most other Independent Fiscal Institutions (IFIs) undertaking FSRs who also assume these areas of spending (and pensions) are influenced by demographic change.

3.100 For other areas such as environmental protection or economic affairs, we think these are less influenced by demographic change. We instead assume that these will grow in line with the economy beyond the final year of the Scottish Government's spending review plans.

3.101 In this section, we describe how we will forecast Scottish Government spending in the medium term and then our approach to the long-term projections. There are two approaches we plan to take. For areas which are typically subject to demographic pressures, we use a profile of spending by year of age and gender across the population to understand how spending will shift in line with our population projections. We also include a factor to account for economic growth in these areas of spending. For all other areas we do not expect the demographic make-up of the population to affect spending and assume that spending will grow in line with GDP growth.

Scottish Government medium-term spending plans

3.102 To understand Scottish Government spending plans in the medium term, we will use the 2023-24 Scottish Budget, the Resource Spending Review (RSR) for 2023-24 to 2026-27 and the Capital Spending Review (CSR) for 2022-23 to 2025-26.

3.103 The Scottish Government published a four year RSR in May 2022 covering the period from 2022-23 to 2026-27.[62] Alongside the RSR, an update to the 2021 CSR was published in May 2022, which set capital spending plans out to 2025-26.[63]

3.104 We included discussion of Scottish Government RSR spending plans in our May 2022 SEFF report for the first time.[64] In that report, we focussed on resource spending, as it was published alongside the 2021 RSR. In the RSR and Scottish Budget, the Scottish Government describe spending plans by ministerial portfolio. Because portfolios can involve a number of areas of spending and these can change over time, we will use the COFOG categories to project spending. The OBR and other IFIs also use this to categorise areas of government spending. We include in our Statement of Data Needs that the Scottish Government have agreed to provide the planned spending data we need using COFOG and we are reliant on that for our projections.[65] We have also recommended that the Scottish Government publishes spending plans by COFOG in its Budget documentation. We show recent trends in Scottish Government and local authorities' spending by COFOG in **Chapter 2**.

3.105 We will use Scottish Government data setting out the 2023-24 Scottish Budget spending plans including by splits by capital and resource, portfolio and by COFOG including subcategories under the main classifications. We will assume the proportion of spending in each COFOG category is constant for portfolios. We will then use Scottish Government's portfolio allocations over the RSR period to project resource spending in each COFOG area until 2026-27.

3.106 We will need to consider both resource and capital spending in our projections. This is especially important for the Scottish Government, as resource and capital funding through the Block Grant are broadly ring-fenced to each area. Although resource funding can be used for capital spending, capital funding can only be used for capital spending. This means that Scottish Government spending in each area needs to match their funding envelope each year.

3.107 We will use the Scottish Government's spending plans to form the starting point for our long-run projections of Scottish Government spending. After the end of the spending plans, we will switch to

[62] Scottish Government (2022) Investing in Scotland's Future: Resource Spending Review (link)
[63] Scottish Government (2022) The Outcome of the Targeted Review of the Capital Spending Review – Updated Spending Allocations for 2023-24 to 2025-26 (link)
[64] Scottish Fiscal Commission (2022) Scotland's Economic and Fiscal Forecasts – May 2022 (link)
[65] Scottish Fiscal Commission (2022) Statement of Data Needs – August 2022 (link)

our long-term projection assumptions using our demographic and GDP projections to inform how spending will change.

Long-run projections

3.108 Our long-term projections of spending will be based on the assumption that current levels in the provision of public services are continued for the projection period, we do not assume there will be policy changes. The projection is based on demographic changes and economic growth.

3.109 For most areas of spending we will keep these constant as the share of GDP which they represent at the end of the RSR period. Our GDP projection uses the adult (age 16 and older) population as one of its determinants capturing some of the change in population size over the fifty-year horizon. However we do not consider the changing age structure of the population to be a driver of spending in most areas including general public services, public order and safety, economic affairs, environment protection, and recreation, culture and religion. We do consider demographic change important for health, education and social protection spending and discuss that further in the **Spending in Each Area Section**.

3.110 Figure 3.8 sets out our planned approach for each COFOG category. We explain recent trends in each area of Scottish Government spending in **Chapter 2**. The main demographically influenced areas are health, education and social protection and social security. Social security come under the social protection COFOG category but we treat it separately. For all other areas of spending, we assume that they will grow in line with GDP.

Figure 3.8: Modelling approach for spending by COFOG area

COFOG category	Spending included	Modelling approach
Demographic influenced spending		
Education	Schools, higher education, further education	Project with demographics and productivity
Social Protection (excluding social security)	Social work, adult social care	Project with demographics and productivity
Social security	Devolved social security payments	Project with demographics
Health	NHS services, medical research	Project with demographics and productivity and non-demographic cost pressures
Other areas of spending		
General Public Services	Executive spending, financial and fiscal affairs, transfers between levels of government	Grow with GDP
Public order and safety	Police services, fire-protection services, prisons, law courts	Grow with GDP
Economic affairs	Agriculture, forestry, fishing and hunting, fuel and energy, transport, communication	Grow with GDP
Environmental protection	Waste management, pollution management, protection of landscapes	Grow with GDP
Housing and community amenities	Housing development, water supply, street lighting	Grow with GDP
Recreation, culture and religion	Cultural services, devolved BBC broadcasting	Grow with GDP
Defence	Military defence, foreign military aid	Grow with GDP
Other spending [1]	Transfers between Government departments, financial transactions	Grow with GDP

Source: Scottish Fiscal Commission

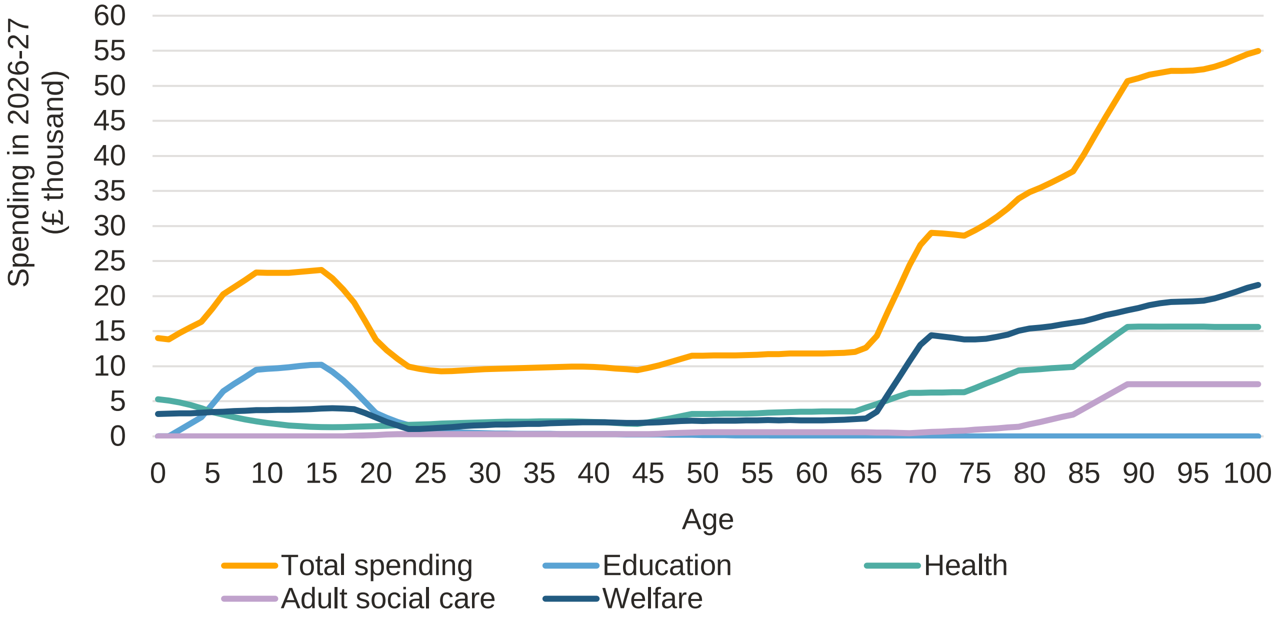
[1] COFOG data in OSCAR is based on Government spending on public services, and so does not include these areas of spending.

Age and gender profiles for spending

3.111 For those areas of spending which we will project based on demographics, we plan to base our projections on profiles of spending by age and gender. These profiles are used to estimate how current spending levels will change given the projected change to the structure of the population.

3.112 These profiles estimate the proportion of average annual spending by each year of age and by gender for areas of spending. For example, spending on education is at its highest for children and young adults aged 22 or younger, while health spending increases for individuals aged 65 and over. We show representative spending profiles by year of age from OBR in Figure 3.9.

Figure 3.9: OBR representative spending profiles by year of age



Source: Scottish Fiscal Commission, OBR (2022) Fiscal risks and sustainability – July 2022 (link).

3.113 Having estimated spending by each year of age, we then grow this in line with the population projections. This means that our spending projections will capture how the age structure of the population changes over time.

3.114 Where we project spending using age and gender profiles, we also project by productivity in line with how the OBR project demographically affected areas of spending. This accounts for increased spending resulting from economic growth, as we would expect growth in spending even if there was no change in population demographics.

3.115 For the purposes of our FSR, we are interested in the funding and spending projections and their effects on the annual budget gap. We are keen to have consistency in our approach, assumptions and data sources between our funding and spending projections where appropriate. This is so that where there is a gap between funding and spending we can be sure it is not an artefact of different data sources or methodological differences. We plan to match OBR's approach to projecting spending in our projections of Scottish Government spending. This will let us understand how demographic differences in Scotland and England will affect funding and spending, and any gap between them.

3.116 We are using the OBR projections of UK Government spending to inform our Block Grant projection, for these reason we are considering using the spending profiles for the UK used by the OBR and produced by HMT as spending profiles for projecting Scottish Government spend.

3.117 Total spending on specific areas differ between Scotland and the rest of the UK, we will consider whether spending profiles are likely to be different between Scotland and the UK by year of age and gender. Scottish Government published profiles of their 2019-20 spending in their 2021 report 'Budget 2019 to 2020: feasibility of distributional analysis – study'.[66]

3.118 We are working with both OBR and Scottish Government to understand which profiles are best to use to project Scottish Government spending. We have not tested using these profiles and will

[66] Scottish Government (2021) Budget 2019 to 2020: feasibility of distributional analysis – study (link)

investigate their applicability for Scotland further as we develop our work in the autumn. We will set out which profiles we use for our spending projections in our 2023 FSR.

Spending in each area

Demographic influenced spending

3.119 We expect that health, education and social protection are the most significant areas that will be influenced by demographics. For each of these areas, the way the population is expected to age is likely to change pressures over time. Broadly, we may expect that spending on health and social care will increase over time, as more must be spent to take care of older people. On the other hand, spending on education may decrease as there are fewer school age children in the future. For each of these areas, we will produce detailed projections of spending based on our projections of the population to understand how these areas of spending will change over time.

3.120 We may need to make specific assumptions around how spending in each area will grow. For example, other IFIs assume that health spending will grow as a result of more than just demographic influences. In 'Working paper No. 9: Fiscal sustainability and public spending on health', the OBR set out evidence that there will be additional non-demographic cost pressures on health spending.[67] The pressures are driven by areas such as technological advances that allow more health conditions to be treated, or increased spending on treatment for mental health conditions, which lead to a greater increase in health spending than that implied by only demographic effects. The OBR assume that this increase in health spending will converge to an additional 1 per cent growth each year for primary and secondary care.[68] We plan to match this assumption for our projection of Scottish health spending.

3.121 For adult social care, the Scottish Government have introduced a Bill to establish a National Care Service.[69] We are considering how this could affect spending on social care, which may be a significant source of pressure as the population ages. We will set out any details on assumptions we make around spending on social care in our FSR.

3.122 For education, we expect that there will be less specific pressures on spending. However, we note that schooling years are slightly different in Scotland to England. This may lead to slight differences in how demographics influence education spending in Scotland compared to funding received from spending in the rest of the UK.

Scottish Government social security

3.123 Our five-year forecasts of social security spending are largely based on the number of individuals expected to receive payments, also referred to as the caseload, and the payment amount we expect them to receive. Most of our caseload forecasts are linked to demographics for the age groups expected to receive payment, for example disability spending increases with age while payments to children relate to the number of births and size of the child population. We have very detailed forecast models for all seventeen social security payments.

3.124 To produce fifty-year projections of social security spending we plan to adopt a new approach. The OBR produce fifty-year projections of welfare spending based on the age profile of total welfare spending, this includes pensions and means-tested payments such as Universal Credit which are

[67] OBR (2016) Working paper No. 9: Fiscal sustainability and public spending on health (link)
[68] OBR (2017) Fiscal sustainability report – January 2017 (link)
[69] National Care Service (Scotland) Bill (link)

not devolved. Therefore we cannot use the OBR's existing approach. Instead we plan to develop age profiles of devolved social security spending based on current Scottish Government policy.

3.125 We plan to estimate spending per head by age and gender for all devolved social security spending for the final year of our five-year forecasts, 2027-28. Combining these spending profiles with our demographic projections and inflation increases to payment rates will give a projection of future social security spending. We also plan to look at a longer series of data, both in our forecasts and in outturn data from DWP administered payments to explore the extent to which past increases in spending have resulted from demographic change and inflation changes. We will explore whether there has been an increase in spending on disability benefits which cannot be explained by demographic change or inflation and therefore may continue to apply in the future. The OBR's Welfare Trends Report published in 2019 identified that spending on disability benefits had risen faster than survey-based measures of disability prevalence had increased.[70] We will consider whether an adjustment is required to the projections to account for likely future changes in spending.

3.126 The final part we will consider in developing our projections is Scottish Government policy commitments and the extent to which the Scottish Government's policies are fully reflected in our five-year forecasts. For example the full effects of some Scottish Government changes to social security payments will take more than five-years to come into effect. We plan to explore whether any payments should be projected separately to account for the future effects of policy changes the Scottish Government has already introduced or committed to introducing in the next five years.

Social security Block Grant Adjustments

3.127 Social Security BGAs provide funding for the largest devolved payments. The level of funding depends on growth in UK Government spending in England and Wales on the corresponding payments. Social Security BGAs are an important part of assessing the sustainability of Scottish Government finances. The effect will depend on how the BGAs evolve relative to the Scottish Government's projected long-term social security spending on the payments that replaced them.

3.128 Although OBR produce projections of UK welfare spending these relate to total welfare spending not devolved spending. For consistency, we will apply the same approach to projecting UK Government spending in England and Wales on the devolved payments as we do for Scottish Government Social Security spending. This will mean that we will estimate the spending and funding on social security consistently. We plan to develop spending profiles by age and gender for the corresponding payments in England and Wales, and then project these in line with demographics. We will also review the historic data for England and Wales to consider whether spending on disability benefits has increased in England and Wales. Applying then the block grant adjustment formulas will give us projected Social Security BGAs.

GDP influenced spending

3.129 Other areas of spending include transport, rural affairs, funding to local government, and environmental protection. We do not see a reason to assume that these areas will be affected by the demographics across the population, as they will be more influenced by broad economic trends.

3.130 We plan to assume that each of these areas of spending will grow in line with GDP. This is a broad-brush assumption which assumes that spending in each of these areas will be constant as a share of the full economy. This assumption keeps our projections of spending in each of these areas in

[70] OBR (2019) Welfare trends report – January 2019 (link)

line with the OBR's, so any differences between the Block Grant funding and spending will be determined by economic and population differences.

3.131 This is in line with the OBR's approach for projecting areas of spending not directly related to demographics, and means that the funding the Scottish Government receives via the Block Grant should be on a comparable basis to how we will project Scottish Government spending.

Other areas of the Scottish Budget

Scotland Reserve

3.132 As budgets grow in scale it is likely that underspends will grow too. Therefore, the capacity of the Reserve to manage funding between multiple years will be limited, and the Reserve is likely to be primarily used for managing underspends between consecutive years.

3.133 Given the short-term operational nature of the Reserve, it does not play a significant role in the long-run sustainability of Scottish Government finances. Therefore, we do not intend to project Scotland Reserve balances and/or drawdowns. More detail is available on the Scotland Reserve in our 'Funding for the Scottish Budget' paper.[71]

Borrowing

3.134 Borrowing powers allow the Scottish Government to manage forecast errors and top up the capital budget. They can borrow yearly up to £300 million to manage negative forecast error and up to £450 million to boost capital investment. The total borrowing limits are £1,750 million for resource and £3,000 million for capital.[72]

3.135 As borrowing limits were fixed in nominal or cash terms at the time of the fiscal framework agreement and the Scotland Act 2016, any analysis of their effectiveness and any implications for sustainability has to consider their size relative to that of the Scottish economy and the Scottish Budget.

3.136 We will project Scottish Government capital borrowing in order to assess how its changes in relative value to the projected size of the Scottish economy and Budget in our long-term projections. We will consider the implications of the Scottish Budget growing for projected taxes, BGAs and reconciliations in the context of the resource borrowing limit.

Annual Managed Expenditure

3.137 Whilst the Scottish Government's AME is relatively large, under the current arrangements it does not affect the long-term sustainability of the Scottish Government finances. This is because the UK Government meets Scottish Government AME funding needs in full. Any long-term projections of this spending would be directly offset by an equal amount of funding, leading to a neutral effect on Scottish Government fiscal sustainability. This means that we do not plan to project this spending over a fifty-year horizon.

71 Scottish Fiscal Commission (2021) Funding for the Scottish Budget (link)

72 When the criteria for a Scotland-specific economic shock are met, yearly resource borrowing limits to deal with negative forecast error increase to £600 million per year for the following three financial years.

Non-cash

3.138 Non-cash funding comes from the UK Government. It is ring-fenced for the different adjustments required to comply with National Accounts rules, mainly depreciation and impairments. Non-cash funding and limits for the Scottish Government are calculated through the Barnett formula – that is, they are based on changes to non-cash spending plans in comparable UK Government departments.

3.139 Non-cash funding does not result in actual spending power for the Scottish Government, and so it does not matter for the long-term sustainability of the Scottish Government finances. We do not intend to model a projection of non-cash funding.

Chapter 4
Assessing fiscal sustainability

Overview

4.1 This chapter sets out how we will assess the Scottish Government's fiscal sustainability using a measure which we will refer to as the annual budget gap. We describe how fiscal sustainability is measured in other countries and how we propose to measure it for the Scottish Government. We will also describe scenarios for assessing the robustness of the Scottish Government's finances to shocks.

Aims of our fiscal sustainability measure

4.2 We discuss in **Chapter 1** the imprecise nature of long-term projections and how our report will focus on the pressures on public finances rather than a specific metric and its outcome. Despite the wider focus of our future report, in order to assess fiscal sustainability we still need an indicator that will allow us to see the scale of the challenge and monitor how it changes over time.

4.3 Our measure of fiscal sustainability should account for changes in funding and spending projections. It should be sensitive to the underlying pressures on the public finances such as government commitments to spend more in existing or new areas, the changing demographic structure and the interdependencies between the funding arrangements for the Scottish and UK Governments.

4.4 Our measure should be easy to understand and be relevant to policy makers and interpretable by those interested in the Scottish Government's financial future.

4.5 Ideally, we would like a measure which is comparable over time and internationally. Our measure will capture how the Scottish Government's finances are likely to change over time, and if repeated will show how the position has changed at different time points in the future. Because the Scottish Government is a devolved government, internationally recognised measures of fiscal sustainability do not apply in the same way to the Scottish Government's finances. Internationally a measure such as the commonly used debt-to-Gross Domestic Product (GDP) ratio allows comparability. We discuss in in the next section why this measure and others dependent on debt are not suitable for the Scottish Government's finances. This limits international comparability to an extent, but we can still compare with other nations on what pressures are at play when they influence the fiscal outlook, the scale of the challenge, and what options a government has to mitigate the pressures.

Potential measures of fiscal sustainability

Overview

4.6 This section describes the measures of fiscal sustainability used or considered by the Office for Budget Responsibility (OBR) and other Independent Fiscal Institutions (IFIs) in their Fiscal Sustainability Reports (FSRs). Fiscal sustainability is often thought about in terms of solvency, or a government's ability to meet its current and future spending obligations.

4.7 Formally solvency is defined by the inter-temporal budget constraint, which compares a government's future spending plans to future revenue and debt. The inter-temporal budget constraint requires that a government has sufficient capacity to service debt after spending on services. It is used to inform measures of fiscal sustainability, as a theoretical foundation to explain whether a government's fiscal position is sustainable over the long term.

4.8 In practice, simpler measures are often used to understand the government's long-term fiscal position. Measures used by other IFIs include the fiscal gap using the debt-to-GDP ratio, intertemporal budget gap, and intergenerational budget gap. We consider whether these are suitable for assessing the sustainability of the Scottish Government's finances.

The fiscal gap

4.9 The fiscal gap is the immediate and permanent change in the primary balance needed to achieve a chosen debt-to-GDP ratio in a given year. The OBR and most of the FSRs by other IFIs which we reviewed use the fiscal gap as their measure of fiscal sustainability.[73] This refers to the permanent and immediate change needed in spending or taxation over the projection period to reach a certain debt-to-GDP ratio. This is usually expressed as a percentage of GDP.

4.10 There is not an ideal debt-to-GDP ratio but a ratio from a certain point in time such as the beginning of the projection period or a range of thresholds are usually selected.

4.11 The fiscal gap is easily communicable as a percentage of GDP, this allows comparability across economies and is relevant for policy makers as it describes the action required to improve fiscal sustainability.

4.12 This measure is not applicable for our needs as the Scottish Government cannot borrow to fund deficits in its resource balance.

Intertemporal budget gap

4.13 This measure assesses how able a government is to meet its future obligations, as measured by the 'intertemporal budget constraint'.

4.14 To meet the intertemporal budget constraint the present value of future revenues should be equal or greater than the sum of its existing debt plus the present value of its future spending over an infinite horizon. It seeks to remove debt rather than reach a certain threshold so it is a stricter measure than aiming to reach a certain debt-to-GDP ratio.

4.15 Where projections show the intertemporal budget constraint will not be met, the intertemporal budget gap is measured by outlining the of the immediate and permanent increase in taxes or cut in public spending required to meet the constraint. It expressed as a percentage of GDP.

4.16 Like the fiscal gap with debt-to-GDP ratio, this measure is not applicable for the Scottish Government given its limited borrowing powers

[73] We reviewed FSRs from the UK, Ireland, Germany, Switzerland, New Zealand and from devolved administrations Ontario (Canada) and Victoria (Australia). Our search was not exhaustive and we briefly reviewed a handful of additional FSRs.

Intergenerational budget gap

4.17 Intergenerational fairness was proposed by the OBR in their FSR scoping paper. It was not subsequently used and we did not come across it in the other FSRs we reviewed.[74] HM Treasury (HMT) did use it in its Long-Term Public Finance Reports up to 2006 but it appears to be used infrequently now.

4.18 The measure assesses whether a government can meet its current obligations without causing the next generation to pay for them. It applies a solvency condition into the future and looks at whether tax rises would be needed to pay off previously accumulated debt. It works out how much tax people would pay over their lifetime as a function of their age. These are calculated for existing generations and for future generations based on the taxes required to pay off previously accumulated debt. If the account for future generations is larger than for the current generation then it indicates unfairness. The intergenerational budget gap is the change in tax or spending required to close the imbalance.

4.19 The measure is more sensitive to age-related expenditure rather than to debt, but solvency is still a component of the measure.

4.20 We do not to propose to use this as our primary measure of fiscal sustainability.

The annual budget gap – our proposed measure

Overview

4.21 Each one of the fiscal sustainability measures described above is reliant on debt or solvency as part of its measurement. We discuss in **Chapter 1** how we must approach fiscal sustainability in a way which is relevant for the Scottish Government and the rules of the fiscal framework.

Proposed measure

4.22 The fiscal framework requires the Scottish Government to have a broadly balanced budget each year. Therefore, a debt based measure cannot be used to assess fiscal sustainability. The balanced-budget requirement does, however, supply us with a condition to assess fiscal sustainability against.

4.23 As others use the change in taxation or revenue required to reach a selected debt-to-GDP ratio, we can use the change required to meet the balanced-budget requirement.

4.24 In **Chapter 3** we outline how we will project Scottish Government funding and spending, these projections will show a gap or surplus between projected funding or spending each year. The Scottish Government showed a similar medium-term projection in their December 2021 Medium Term Financial Strategy, published before spending plans were adjusted in the recent Resource Spending Review.[75]

[74] OBR (2011) Discussion paper No.1: What should we include in the fiscal sustainability report? (link)
[75] Scottish Government (2021) Medium Term Financial Strategy – December 2021 (link)

4.25 For communicability and so that we can easily interpret the changing scale of pressures on public finances over time, we intend to express the gap as the change in spending or revenue as a percentage of GDP or a percentage of the Scottish Budget required to close the gap.

How to express this measure

4.26 In most other countries a change in spending or revenue as a percentage of GDP is used to describe the change needed to meet a certain condition.

4.27 We could communicate our measure for the Scottish Government in this way but could risk being misleading. For other nations, the relationship between GDP and public finances is clearer. In Scotland public spending and services are delivered by the UK Government, the Scottish Government and local government. Taxes are also split between devolved and reserved taxes, with revenue from reserved taxes collected by the UK Government. It would not be reasonable to compare a percentage change required in GDP to meet a fiscal requirement for the Scottish Government with the UK or other nations to meet a similar condition.

4.28 These limitations do not necessarily rule out the possibility of applying the measure this way, but we would need to take care in our communication of the measure and would need to ensure the 'percentage change in GDP required' for the Scottish Government was not unfairly compared to other nations.

4.29 Using a percentage of GDP to describe the change required would be easy to communicate, it would be relatively familiar for policy makers and would capture the scale of pressures on public finances over time. It would need to be expressed with caveats to remind readers that for the Scottish Government it has a slightly different meaning than for other nations.

4.30 We are considering alternatives such as the percentage change required in funding or in spending and we invite feedback on how to express the measure in our consultation questions in **Chapter 5**.

Risks

Communication

4.31 We are aware of the risks associated with using a quantifiable metric for fiscal sustainability – that it may be perceived as being a precise estimate of the future fiscal position and readers focus on a specific but uncertain and illustrative number rather than the pressures on public finances and their mitigation. Given the current interest in the devolution and constitutional arrangements for Scotland, there is also a possibility it is misinterpreted as a risk of the current constitutional settlement or of independence. It would be wrong to interpret these findings in such a way. We have stressed in this paper the value of the FSR in highlighting the pressures and risks for the future rather than being a precise projection. We will take care to emphasise the illustrative and theoretical nature of our projections and our fiscal sustainability measure. This is a risk for all IFIs producing FSRs, however the political context into which our report will be released brings extra risks for the findings to be misconstrued. We invite feedback on how we describe the annual budget gap in our consultation questions in **Chapter 5**.

Comparability

4.32 We outline some of the reasons why discussing the change in percentage of GDP required to meet the balanced budget condition would not be comparable to other nations in **Paragraph 4.27**. A more substantive factor is that where other nations use a target debt-to-GDP ratio, that is capturing the accumulation of debt over time and interest paid on that debt, our measure would only capture the gap between spending and revenue at one point in time. The gap from the previous year would not be carried forward and would not accumulate interest. This means our measure is effectively more lenient than for other nations where the debt-to-GDP ratio is applied. It does reflect the rules of the fiscal framework and the Scottish Government would not have the means to carry the gap forward so we have opted to apply our annual budget gap measure in this way.

Robustness to shocks

Overview

4.33 The OBR and other IFIs in their FSR discuss how shocks or stress tests may affect future fiscal sustainability. In its latest report the OBR model the effects of future recessions, a geopolitical stress test and near- and medium-term energy price shocks.[76] In some other FSRs, IFIs discuss the potential effects of various risks in their narrative rather than through modelling. Aside from specific risks, most FSRs consider high and low scenarios for projections of funding and spending and consider the implications of these different scenarios on fiscal sustainability.

4.34 Showing robustness to shocks is a useful assessment of how sensitive the projected position is to change. It indicates whether and by how much an external shock could change the course of public finances and their sustainability.

4.35 We intend to apply tests like this to our projections for Scotland, but we need to adapt the types of stress tests usually used for the Scottish context. The UK Government determines the fiscal response to most external shocks such as recession or energy price crises. The Scottish Government is insulated from the debt accrual which may occur but how the UK Government choose to respond to higher debt will also influence the Scottish Government's finances.

4.36 Shocks relevant to the Scottish Government would be changes to UK Government policy in spending or taxation, or divergences in economic performance.

4.37 FSRs generally include high and low scenarios usually showing the sensitivity of fiscal projections to changes in the population or economic determinants. We need to assess whether this would be relevant for the Scottish Government. It may be that to show the divergence in population and economy between Scotland and the rest of the UK would be more appropriate given the Scottish Government may be insulated from the effects of population decline, ageing and from slow growth if the UK is on the same trajectory.

Potential stress tests

4.38 As outlined in **Chapter 2**, the Block Grant is an important part of Scottish Government funding and it is determined in part by changes to UK Government spending each year.

4.39 The 2022 FSR published by the OBR outlines the scale of the UK's fiscal sustainability challenge. We use the OBR's projections of UK Government spending which assume spending in line with current policy and growing with demographic demand or economic growth as appropriate. The OBR's projections show spending exceeding revenue. As a result, debt is projected to increase to 267 per cent of GDP in 2071-72 in their baseline scenario and to reach 430 per cent in their most challenging stress test.[77] The UK Government may respond to these pressures with a reduction in

[76] OBR (2022) Fiscal risks and sustainability – July 2022 (link)
[77] OBR (2022) Fiscal risks and sustainability – July 2022 (link)

spending or an increase in taxation which could affect the Scottish Government's Block Grant and Block Grant Adjustments (BGAs), respectively.

4.40 Our baseline scenario will assume that UK spending and taxation will continue in line with current policy and that the UK Government will fund this through borrowing and increasing its deficit each year. Scotland's funding position relative to the UK would still be influenced by relative changes in demographic and economic performance.

4.41 To assess the robustness of the fiscal position to shocks we will test scenarios whereby the UK Government introduces a reduction of spending in devolved areas and an increase in income tax. These are simplified scenarios and spending cuts could occur in reserved areas instead of or as well as devolved areas, and a change in taxation policy may similarly apply to reserved taxes rather than or as well as devolved taxes. This fits for our aim to apply a stress test to the Scottish Government's projected fiscal sustainability rather than consider possible policy responses by the UK Government to fiscal pressures.

4.42 The Block Grant and Scottish income tax are the two most important components of Scottish Government funding. The models we are developing for projecting the Block Grant and for projecting Scottish income tax and its BGAs will allow us to apply different scenarios and assess how they affect the funding position and the annual budget gap.

4.43 We could also test the effect of divergence between Scotland and the rest of the UK in population and economic performance. If both Scotland and the UK experience similar population decline or slow economic growth, the Scottish Government could be insulated from the effects. We could compare scenarios of both Scotland and the UK experiencing population decline and slow growth as well as just applying them to Scotland or just applying to the rest of the UK.

4.44 We set out specific questions on these scenarios in **Chapter 5**, where we pose our consultation questions and welcome feedback on our proposed scenarios.

Chapter 5
Consultation questions

5.1 We set out our main consultation questions below with additional prompts and points for consideration. We welcome readers' views on other aspects of our proposed fiscal sustainability report even if they are not covered here. We ask readers to return their views to info@fiscalcommission.scot by 31 October 2022.

1. Is our approach to projecting Scottish Government funding appropriate?

We have outlined our planned methodology for projecting the Block Grant, Scottish taxes and Block Grant Adjustments.

- Are readers satisfied we have a sensible approach to each funding area?
- Are there limitations or risks to this beyond what we have outlined?
- Are there improvements which could be made to funding projections?
- Do our steps in projecting the Barnett determined Block Grant funding seem reasonable? Are there any other factors we should consider?
- Do readers think OSCAR, PESA, Block Grant Transparency reports and the UK Government Spending Review are appropriate data sources?
- Are there any other data sources we should be considering?

2. Is our approach to projecting Scottish Government spending appropriate?

We have outlined our planned methodology for projecting social security spend, demographically related areas of spending, and other spending areas.

- Are readers satisfied we have a sensible approach to each area?
- Are there limitations or risks to this beyond what we have outlined?
- Are there improvements which could be made to the spending projections?
- Are there additional data sources which we have not identified?
- Are there additional non-demographic influences on spending which we should take account of?

3. Is the annual budget gap reasonable to use as our main sustainability measure?

We have outlined our rationale for using a gap between revenue and spending for assessing fiscal sustainability. We intend to present the this as the change in spending or revenue as a percentage of GDP or a percentage of the Scottish Budget or percentage of Scottish Government spending required to close the gap.

- Are readers satisfied this is a sensible approach?
- Are there limitations or risks to this beyond what we have outlined?
- Are there improvements which could be made to this measure?
- Does presenting the gap as a share of GDP, funding or spending seem intuitive? Do readers have a preference for one of these options? Are there alternatives we should consider?
- Are there areas where the indicator could be misinterpreted or misunderstood?
- Are there other fiscal sustainability measures we should consider?

4. Are our stress tests useful for testing the robustness of the fiscal position?

We set out how we will use scenarios specific to the Scottish Government's devolution arrangement to assess the implications of UK fiscal sustainability.

- Are there other stress tests we should consider using?
- Are there other ways we could think about changes to UK taxation or spending?

5. Are readers content with our focus on demographics for our first FSR in 2023?

The objective of our first report is to produce a robust projection of Scottish finances and to focus on the effects of the changing demographic structure of Scotland (and Scottish population changes relative to the UK).

- Are there other ways we could better capture the effects of demographic change?

We proposed an outline for the 2023 FSR in **paragraph 1.65**.

- Does this seem like a reasonable scope to cover in the FSR?
- Are there additional areas we should try to incorporate?

6. What topics should we focus on for future FSRs?

The objective of our first report is to produce a robust projection of Scottish finances and to focus on the effects of the changing demographic structure of Scotland (and Scottish population changes relative to the UK). However, there is scope to explore pressures on fiscal sustainability and the effects of these pressures in discrete reports focused on these topics from a sustainability perspective. We have identified several topics below and invite feedback from readers on whether they would like to see reports focused on these, their order of preference for these, and whether there are additional topics we could explore.

- Pressures on fiscal sustainability
    - Effects of climate change

    - Population health and health inequalities
    - Role of migration (international and from the rest of the UK)
- Effects of pressures on fiscal sustainability
    - Health spending
    - Adult Social Care
- Policy areas (pressures and effects)
    - Child poverty
    - Achieving Net Zero

7. How should we use stress tests to assess Scottish Government fiscal sustainability?

Scotland's population and economic performance relative to the rest of the UK has implications for funding via the Block Grant and Block Grant Adjustments. Fiscal Sustainability Reports generally include high and low scenarios, however, using high and low population and economy scenarios just for Scotland may not sufficiently depict the risks to fiscal sustainability.

- Should we consider how changes to UK spending may influence the Block Grant?
- Should we consider how changes to Scottish population and economic performance relative to the UK's influences the BGAs?

8. Is our scope fitting for the aims of our FSR?

Our broad aim for the FSR is to give insight into the long-term outlook for the Scottish Government's finances, to highlight where there will be pressures on funding and revenue, and to provide evidence for informed debate on the policy challenges causing these pressures and arising as a result.

- Does the scope of the FSR as we have set it out – focusing on demographics and considering interdependencies between the Scottish and UK Governments – meet our aim of showing where there will be pressures on the Scottish Governments finances?
- Do readers have views on what outputs would be best for communicating our findings?

Additional information

Abbreviations

ADP	Adult Disability Payment
ADS	Additional Dwelling Supplement
AME	Annually Managed Expenditure
BGA	Block Grant Adjustment
COFOG	Classification of Function of Government
CPI	Consumer Price Index
CSR	Consumer Spending Review
DEL	Departmental Expenditure Limit
DWP	Department for Work and Pensions
EFO	Economic and Fiscal Outlook
EU	European Union
FSR	Fiscal Sustainability Report
GDP	Gross Domestic Product
HMRC	HM Revenue and Customs
HMT	HM Treasury
IFI	Independent Fiscal Institution
LBTT	Land and Buildings Transaction Tax
LFS	Labour Force Survey
NDR	Non-Domestic Rates
NHS	National Health Service
NRS	National Records of Scotland
NSND	Non-Savings and Non-Dividends
OBR	Office for Budget Responsibility
ONS	Office for National Statistics
OSCAR	Online System for Central Accounting and Reporting
PESA	Public Expenditure Statistics Analyses
PIP	Personal Independence Payment
rUK	Rest of the United Kingdom
SDP	Severe Disability Payment
SEFF	Scotland's Economic and Fiscal Forecasts
SFC	Scottish Fiscal Commission
SLfT	Scottish Landfill Tax
TME	Total Managed Expenditure

A full glossary of terms is available on our website:

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

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All charts and tables in this publication have also been made available in spreadsheet form on our website. For technical enquiries about the analysis and data presented in this paper please contact the responsible analyst:

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

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