

Scotland's Economic and Fiscal Forecasts December 2017

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Foreword

The Scottish Fiscal Commission is the independent fiscal institution for Scotland. This report signifies an important milestone in the Commission's work, and in fiscal devolution to Scotland. These are the first independent and official forecasts of Scottish GDP, devolved tax receipts and devolved social security expenditure.

The Commission is part of the maturing fiscal landscape in Scotland, and we are proud to present our first forecasts today. These forecasts are a key element of the Budget process. They have been designed to be a resource in understanding the Scottish Government's Draft Budget and in supporting scrutiny.

The forecasts presented in this document represent the collective view of the Scottish Fiscal Commission, comprising the three Commissioners. We take full responsibility for the judgements that underpin them and for the conclusions we have reached.

Producing our forecasts for the first time, we have put into practice the Protocol agreed with the Scottish Government. This process is described in the Introduction to the report. It has evolved as we prepared the forecasts, learning what works in order to aid scrutiny and challenge.

We would like to thank the hard-working and rigorous staff of the Commission for their support in the production of our forecasts and underpinning analysis. We would also like to thank officials from across the public sector for their work challenging us on our judgements and ensuring we considered all the available evidence, through more than 25 challenge meetings. This includes the Scottish Government, Revenue Scotland, SEPA, the OBR, and HMRC.

Lady Susan Rice CBE





Professor Alasdair Smith





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Economy		2016	2017	2018	2022	
	Economic Growth	0.4%	0.7%	0.7%	1.1%	Economic growth is subdued, well below the 2% historic growth rate before financial crisis
	Trend Productivity Growth	0.2%	0.2%	0.5%	1.0%	Sluggish GDP growth is driven by slow growth in trend productivity
	Nominal Wage Growth	3.3%	2.0%	2.3%	3.1%	Slow productivity growth also holds back wage growth compared to historic norms
	Employment Growth	-0.6%	1.3%	0.6%	0.1%	Tightening in the labour market and slowing population growth mean slowing employment growth

Tax		2016-17	2017-18	2018-19	2022-23	£ million
	Income Tax	11,214	11,584	12,115	14,296	New policy measure increases forecast by £199 million by 2022-23
	Non-Domestic Rates	2,713	2,810	2,812	3,331	New policy measures announced have reduced our forecast across the period
	LBTT	484	557	588	748	This is the sum of receipts for Residential and Non-Residential LBTT, and the Additional Dwelling Supplement
	Scottish Landfill Tax	148	137	106	82	Landfill volumes fall significantly because of increased incineration capacity

Social security		2016-17	2017-18	2018-19	2022-23	£ million
	Carer's Allowance (inc. Supplement)	234	247	300	355	Increases in weekly payments and the state pension age increase expenditure
	Discretionary Housing Payments	50	60	61	66	Expenditure is increasing because of the cost of mitigating the bedroom tax
	Scottish Welfare Fund	33	33	34	35	Mitigating UK policy to reduce housing cost payments to 18-21 year olds increases costs
	Employability	0	11	24	3	Services are accepting referrals between 2017 and 2020, to help people into work

Policy Announcements - Tax			2018-19	2022-23	£ million
	Income Tax		+164	+199	New 5 band income tax system announced
	Non-Domestic Rates		-96	-92	Seven new measures have been announced, which all reduce revenue
	LBTT		-6	-7	First time buyer relief announced increasing the zero band up to £175,000

Policy Announcements - Spend			£ million		
	Carer's Allowance Supplement		35	35	Carer's Allowance Supplement to bring up to JSA level



Summary

Introduction

- 1 In April 2017 the Scottish Fiscal Commission became responsible for producing independent economic and fiscal forecasts to inform the Scottish Budget.
- 2 The Commission has produced forecasts of:
 - Revenue from fully devolved taxes;
 - Non-savings non-dividend income tax receipts; and
 - Devolved social security expenditure.¹

Table 1: Summary of tax forecasts 2016-17 to 2022-23

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Outturn*						
Income Tax (NSND)	11,214	11,584	12,115	12,582	13,084	13,662	14,296
Non-Domestic Rates	2,731	2,810	2,812	2,867	2,939	3,117	3,331
Land & Buildings Transaction Tax	484	557	588	628	668	707	748
<i>of which, Residential</i>	214	271	305	336	366	395	426
<i>ADS</i>	93	93	93	98	102	106	110
<i>Non-Residential</i>	177	193	190	194	200	206	212
Air Passenger Duty	264	292	306	314	324	336	348
Scottish Landfill Tax	148	137	106	88	90	82	82
Total Tax	14,842	15,379	15,928	16,480	17,105	17,905	18,805

Source: Scottish Fiscal Commission. Figures may not sum to totals because of rounding * Figure for Income Tax is not outturn data, as none is yet available for liabilities in 2016-17. See the income tax section for further detail. Figures may not sum to totals because of rounding

¹ The Commission's specific role on social security is defined in the Scottish Fiscal Commission (Modification of Functions) Regulations 2017 ([link](#))

- 3 In preparing these forecasts the Commission has considered the Government's proposals for policy changes to taxes and social security spending included in the Draft Budget and has produced a costing for each policy. Table 1 shows the tax forecasts produced.
- 4 The Commission is also responsible for forecasting onshore GDP growth in Scotland. The forecast of GDP growth feeds into the Commission's fiscal forecasts. The GDP forecast is also used to assess whether the condition (a 'Scotland-specific economic shock') that triggers additional borrowing powers for the Scottish Government is met.
- 5 The Commission was previously a non-statutory body, which was established in 2014 to scrutinise Scottish Government forecasts of devolved taxes following the Scotland Act 2012. In December 2016, the Commission found the Scottish Government's forecasts of Non-savings non-dividend Income Tax, Land and Buildings Transaction Tax and Scottish Landfill Tax to be reasonable. We also had a role in scrutinising the buoyancy and inflation elements of the Non-Domestic Rates forecast, which we also found to be reasonable.²

Economy

- 6 Scottish economic growth has been slower over the last decade than historic average rates, and the Commission's view is that pattern of slower growth is likely to persist over the next five years.

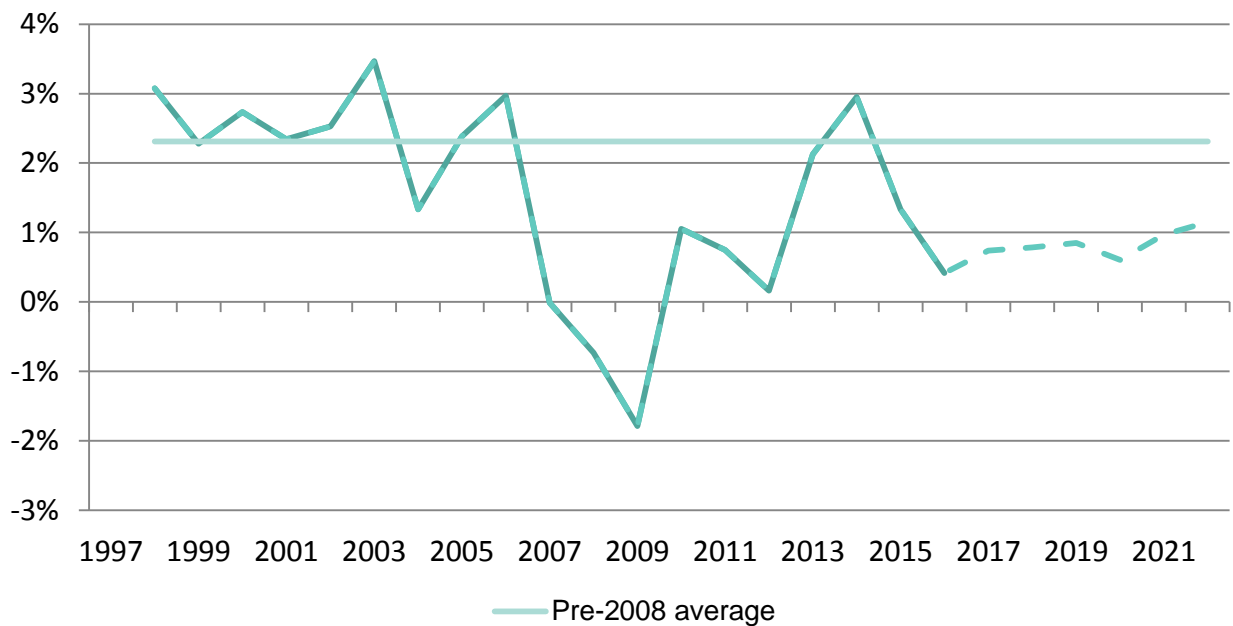
Table 2: Headline economy forecasts, calendar year basis

	2016 Outturn	2017	2018	2019	2020	2021	2022
GDP (% change)	0.4	0.7	0.7	0.9	0.6	0.9	1.1

Source: Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)), Scottish Fiscal Commission

² Scottish Fiscal Commission (2016) Non-statutory Report of Draft Budget 2017-18 ([link](#))

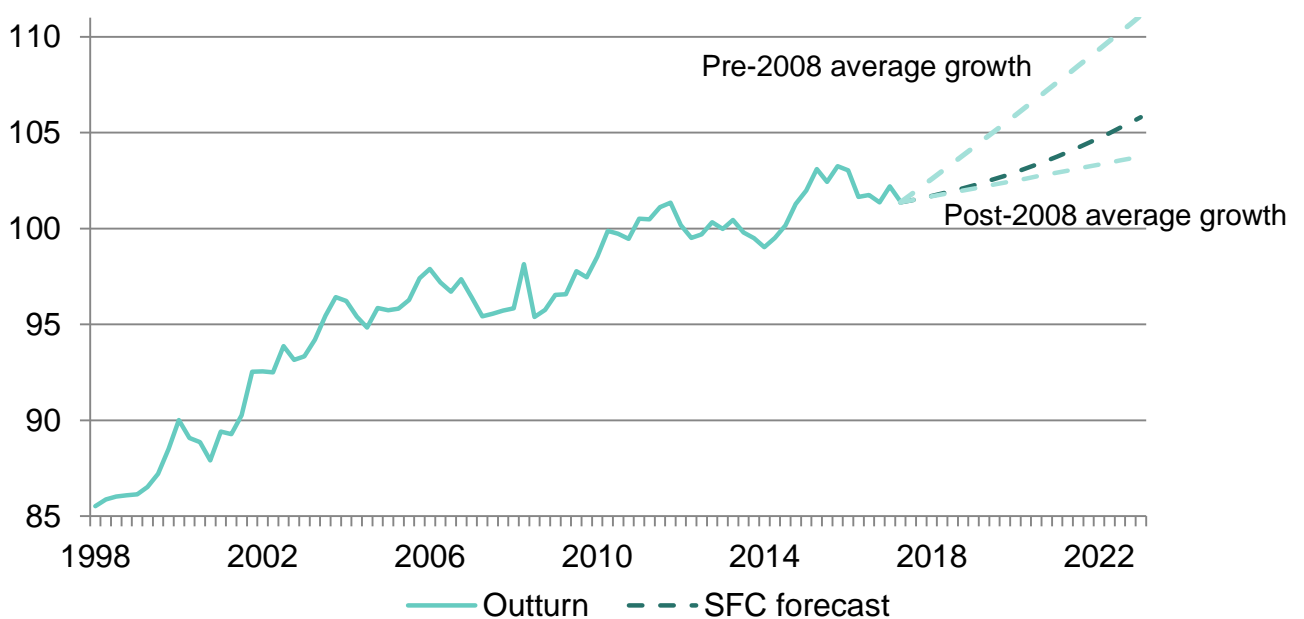
Figure 1: GDP growth in Scotland: outturn & forecast



Source: Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)), Scottish Fiscal Commission

- 7 One of the key factors is slow growth in productivity or output per hour worked. The underlying reasons for this are not yet fully understood and are not unique to Scotland. The Commission's forecast for productivity is shown in Figure 2 below, alongside the historic data and pre- and post-financial crisis averages.

Figure 2: Productivity Growth in Scotland (2014=100)



Source: Scottish Fiscal Commission

- 8 The general slowdown in economic growth observed in recent years would on its own imply a lower forecast for the next five years than pre-2008 historic averages. Scotland faces additional challenges which mean the period of slower growth is unlikely to end in the near future.
- 9 The growth that has been achieved in some recent years has been driven by factors which include a boom in the construction industry, strong labour market growth, a falling savings ratio and support from the oil and gas industry. These factors are unlikely to continue to support growth to the same extent in the coming years.
- 10 Future downside risks include the UK's changing relationship with the EU, a weakening outlook for global trade, Scotland's industrial and demographic structure and weak onshore demand linked to activity in the oil and gas industry.
- 11 In combination, this means limited increases in average earnings and a more modest outlook for employment growth in the coming years compared to the recent past.

UK-EU relationship

- 12 The Commission must make assumptions about the impact of Brexit on Scotland. The outcome of the negotiations is unknown at present, and it is therefore difficult to forecast the impact on the economy. Broadly, the Commission expects both the uncertainty created by the UK-EU negotiation, and the final settlement, to impact negatively on the Scottish economy over the next five years.
- 13 We follow the same approach as the OBR. We use broad-brush assumptions including:
 - The UK leaves the EU in March 2019;
 - New trading arrangements with the EU and others slows the pace of import and export growth; and
 - The UK adopts a tighter immigration regime than currently in place.
- 14 On the last point, we use the 50 per cent net EU migration variant of the ONS 2016 based population projections for Scotland, whereas the OBR uses the principal projection for the UK.³ The Commission judges the 50 per

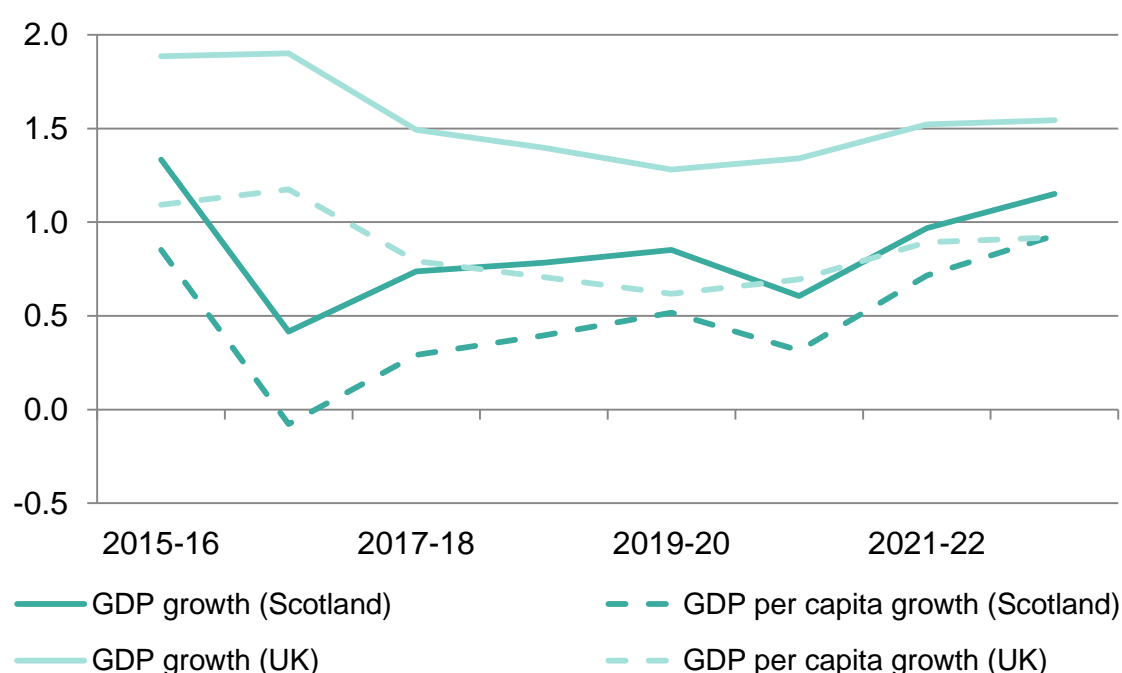
³ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

cent net EU migration variant to be more appropriate for Scottish circumstances.

Population and demographic factors

- 15 Like many developed nations, Scotland faces demographic challenges because of an ageing population. While the Scottish population has been growing in recent years, it has not been growing as fast as the rest of the UK (mainly England) and this difference is projected to continue. Figure 3 shows comparisons between Scottish and UK GDP growth, and GDP growth per person, also known as per capita growth. We expect growth rates of GDP per person in Scotland to converge with those in the UK, while growth in Scottish GDP will remain below UK rates because of a lower growth rate in the Scottish population than the UK population.

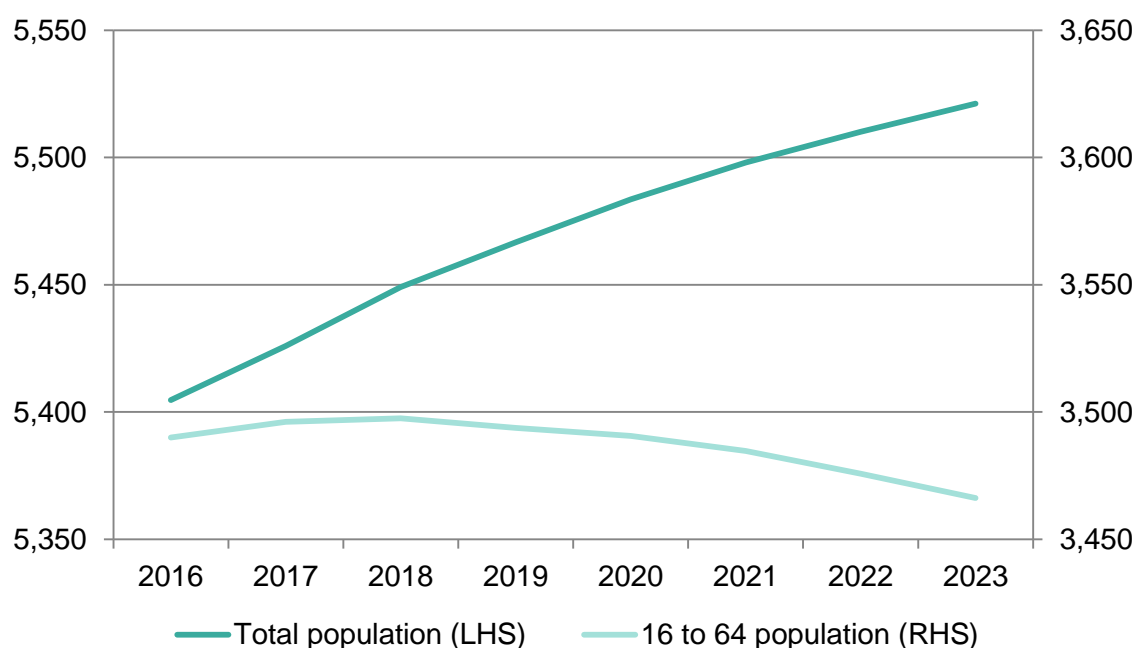
Figure 3: Forecast growth in GDP and GDP per person, Scotland as forecast by the SFC and UK as forecast by the OBR



Source: Scottish Fiscal Commission, OBR (2017) Economic and Fiscal Outlook – November 2017 ([link](#))

- 16 The size of the population aged 16 to 64, which makes up most of the working age population, is very important for the economy and the public finances. These individuals are more likely to be working and will be generating the highest tax receipts, for example, in income tax. While the total population is expected to grow, Figure 4 demonstrates that the population aged 16 to 64 is expected to start to shrink from 2018 onwards.

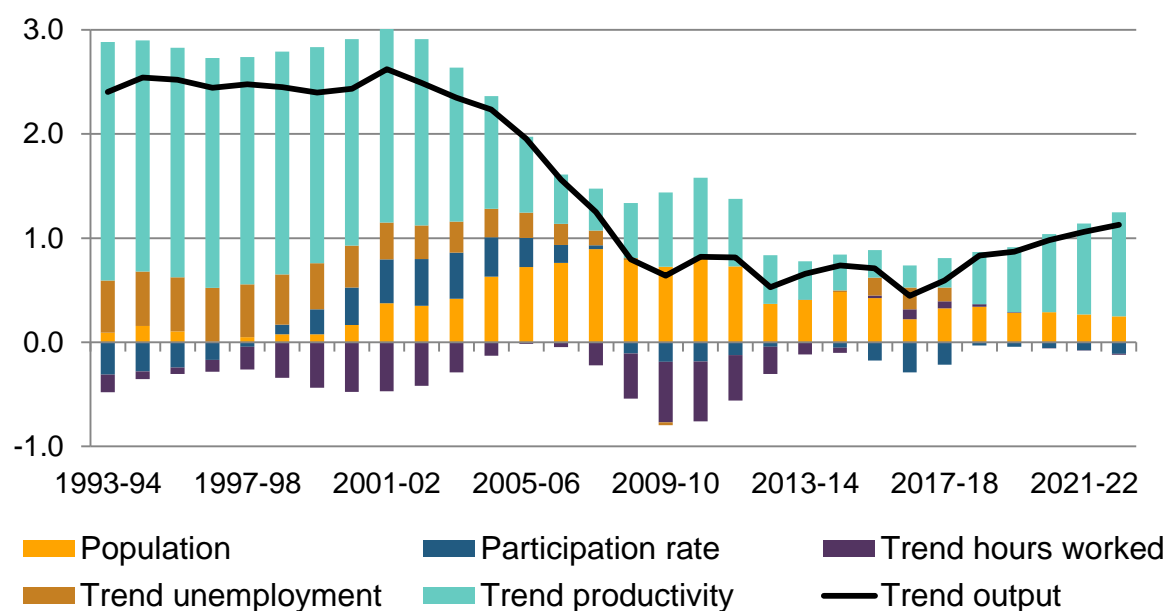
Figure 4: Forecast Scottish total population and population aged 16 to 64, thousands



Source: ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

Potential output

Figure 5: Growth in Scottish potential output by component



Source: Scottish Fiscal Commission

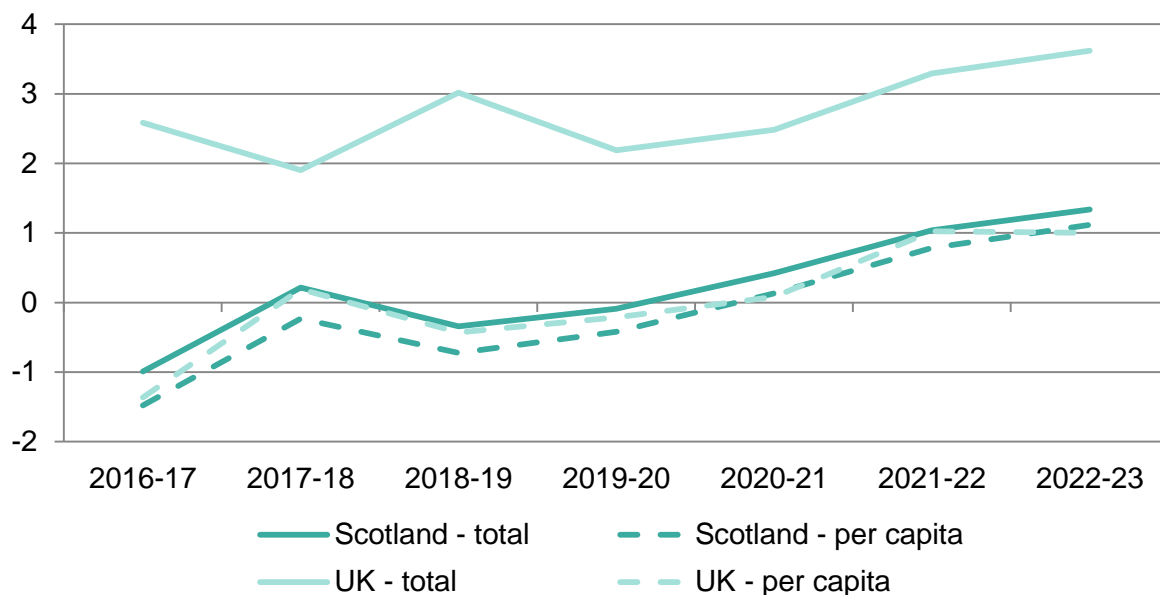
- 17 The judgements the Commission has made on the future path for productivity, the labour market and population growth drive the potential

output of the Scottish economy. Slow growth in the potential size of the economy will act as a limit to GDP growth.

Earnings

- 18 Real household disposable income is not expected to see any growth until 2020-21 because of a combination of slow wage growth, very limited employment growth and inflation. Growth in real household incomes will start to strengthen gradually from 2020 onwards as wage growth starts to increase.

Figure 6: Growth rate of Real Household Disposable Income (RHDI), total and per capita, Scotland compared to OBR UK forecasts

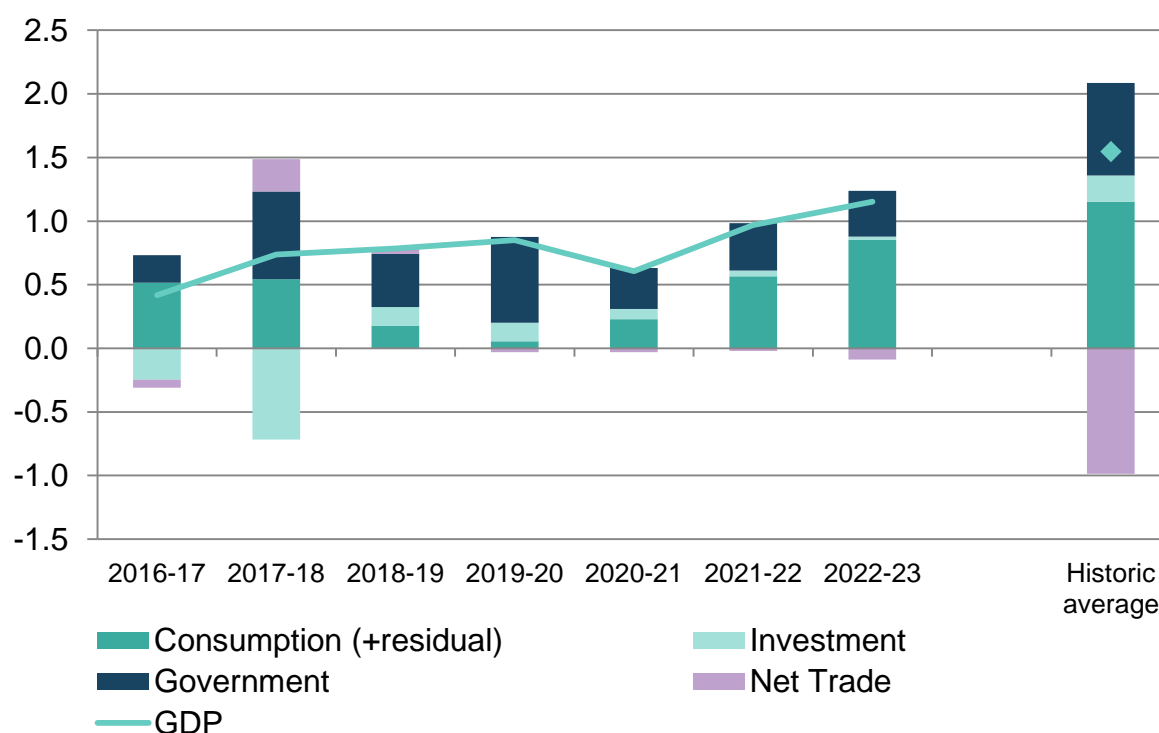


Source: Scottish Fiscal Commission, OBR (2017) Economic and Fiscal Outlook – November 2017 ([link](#))

- 19 The outlook for real household disposable incomes, combined with an already low savings ratio, limits growth in consumption in the early years of the forecast. As Figure 7 shows, the economic growth achieved in 2018-19 and 2019-20 will be driven by the public sector and the fiscal expansion happening in these years, as well as a slight bounce back in investment following falls in recent years.

Overall Economic Outlook

Figure 7: Contributions by component of expenditure to growth in GDP



Source: Scottish Fiscal Commission

Note: Historic average is based on growth from 1998 to 2016

- 20 The outlook for productivity is the most challenging aspect of the economy forecasts. Growth in productivity will have a profound impact on GDP and the Scottish economy as a whole. The sensitivity of the economy forecasts, and income tax revenues, to our productivity assumptions are explored in the main report.
- 21 The Commission's judgement on productivity is that recent trends broadly continue. This judgement is reinforced by further specific factors such as the impact of the oil & gas industry, the impact of the changing UK-EU relationship and recent labour market issues. These all tend to have a negative impact on the outlook for productivity compared to recent years.
- 22 Productivity may not turn out as currently expected for two reasons: either trends change, or some of the issues or events highlighted above evolve differently to how we expect. Growth in productivity could surprise in either direction, and this will have a significant impact on GDP and income tax. With an uncertain outlook, the Commission has balanced a number of factors in coming to our judgement.

Tax

- 23 The Commission's fiscal forecasts directly inform the Scottish Government's Budget. Box 1 explains how the Scottish Budget is determined both by our forecasts and by the OBR forecasts of corresponding UK Government tax receipts.

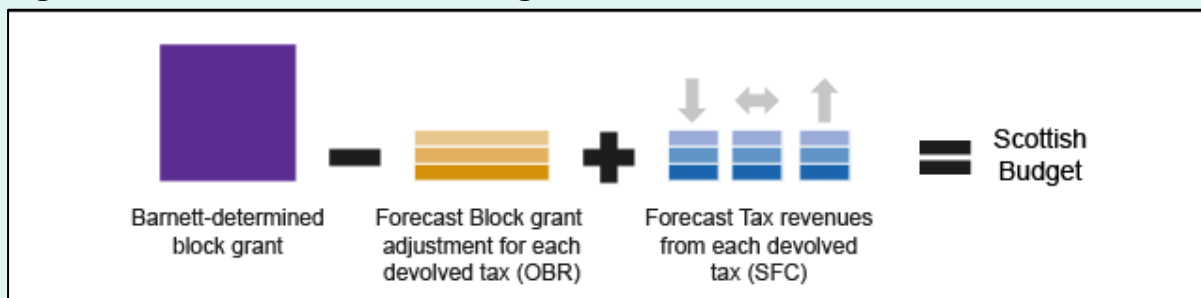
Box 1: Commission Forecasts and the Fiscal Framework

The Scottish Fiscal Commission's forecasts are an important component in determining the total budget that is available to the Scottish Government to spend in each fiscal year. However, it is important to remember that they are not the only relevant forecasts.

The diagram below presents a stylised representation of the way the Scottish Budget will be determined under the Fiscal Framework agreed alongside the Scotland Act 2016. The forecast block grant adjustment changes are based on OBR forecasts of UK Government receipts of corresponding taxes, they do not relate to the OBR's forecasts of Scottish taxes. These forecasts of UK Government receipts are then used by the UK and Scottish Government to calculate the block grant adjustments, in which process the OBR and the Commission have no involvement.

There is one exception to the general picture, which arises in this year's income tax calculation. See Box 3.2 in Chapter 3 for further details.

Figure 8: How is the Scottish Budget Determined?



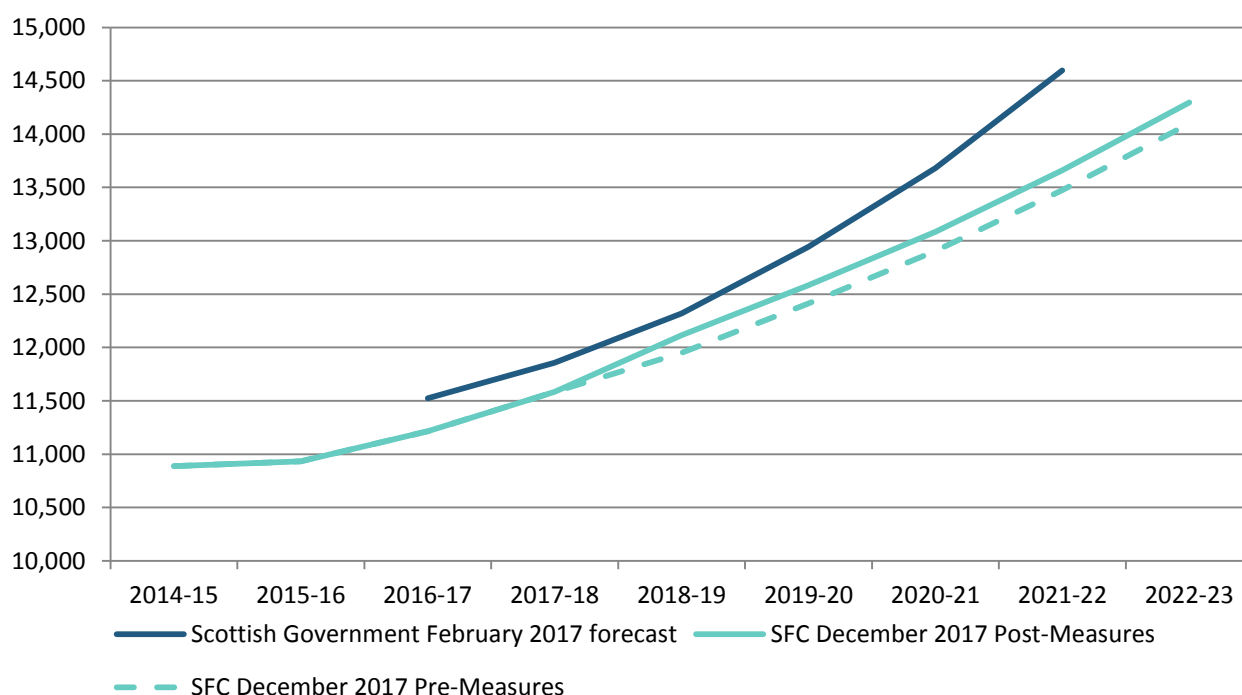
Source: SPICe Briefing (2017) UK Autumn Budget 2017 – impact on Scotland ([link](#))

Taxes which were devolved before the Scotland Acts 2012 and 2016, such as Council Tax and Non-Domestic Rates Income (NDRi), are outwith the Fiscal Framework and so have no impact on the Block Grant. This means there is no indexation mechanism with equivalent UK Government taxes. The Commission has been tasked with producing a forecast of NDRi, but is not responsible for forecasting Council Tax.

Income tax

- 24 The outlook for income tax is driven by the outlook for earnings and employment. Slow growth in the economy means slow growth in income tax revenues. As a result, the Commission is forecasting significantly lower revenue from income tax than previously forecast by the Scottish Government.

Figure 9: Comparison of income tax forecast with Feb 2017 forecast (£m)



Source: Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

- 25 The Scottish Government announced changes to income tax policy, setting new tax rates as shown in Table 3.

Table 3: Policy announcement

Previous Categorisation	New Categorisation	Gross Income (18-19)	Policy Tax Rate	Baseline Tax Rate
Basic Rate	Starter Rate	£11,850 - £13,850	19%	20%
	Basic Rate	£13,851 - £24,000	20%	
	Intermediate Rate	£24,001 - £44,273	21%	
Higher Rate	Higher Rate	£44,274 - £150,000	41%	40%
Additional Rate	Top Rate	Above £150,000	46%	45%

Source: Scottish Government

- 26 Considering the impact of changes in taxpayer behaviour as well as the direct impact on revenue, the policy is expected to raise £164 million to £199 million per year over the next five years, as shown in Table 4.

Table 4: Impact of proposed Scottish Government policy

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Final costing	164	170	178	188	199

Source: Scottish Fiscal Commission

Behavioural effects

- 27 The Commission captures a range of behavioural effects in our income tax modelling. It is important to separate those behaviours which are already included and those additional changes in behaviour in response to changes in policy.
- 28 In the forecast baseline, the Commission includes an adjustment to capture the impact of recent increases in tax motivated incorporations in both the UK and Scotland.⁴ We also use HMRC and OBR modelling work to capture the impact of UK-wide efforts to reduce tax avoidance and evasion.
- 29 Taxpayers may also change their behaviour in response to changes in tax policy. These may take various forms such as tax avoidance, tax evasion, migration or a change in labour supply. Responses may be particularly large

⁴ For a detailed discussion of tax motivated incorporations, see paragraphs 3.14 onwards in the tax chapter.

at the top of the income distribution, whereas we would not typically expect much of a behavioural response amongst lower income taxpayers.

- 30 The Commission uses an approach in line with HMRC and the OBR income taxpayer behaviour modelling. However, for the very highest income taxpayers, the Commission assumes a greater behavioural response. This is because there is scope for some very high income individuals to relocate within the UK to avoid higher taxes in Scotland. The Commission also considered a possible forestalling effect, in which high income individuals would transfer income into the current tax year in response to the proposed increase in the additional rate of tax in the following year, but this is expected to be negligible for the current policy. The effects of behaviour on the static costing are shown in Table 5 below.

Table 5: Static costing and behavioural effect

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Static costing	215	224	235	249	264
Behavioural effect	-51	-54	-57	-61	-65
Final costing	164	170	178	188	199

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

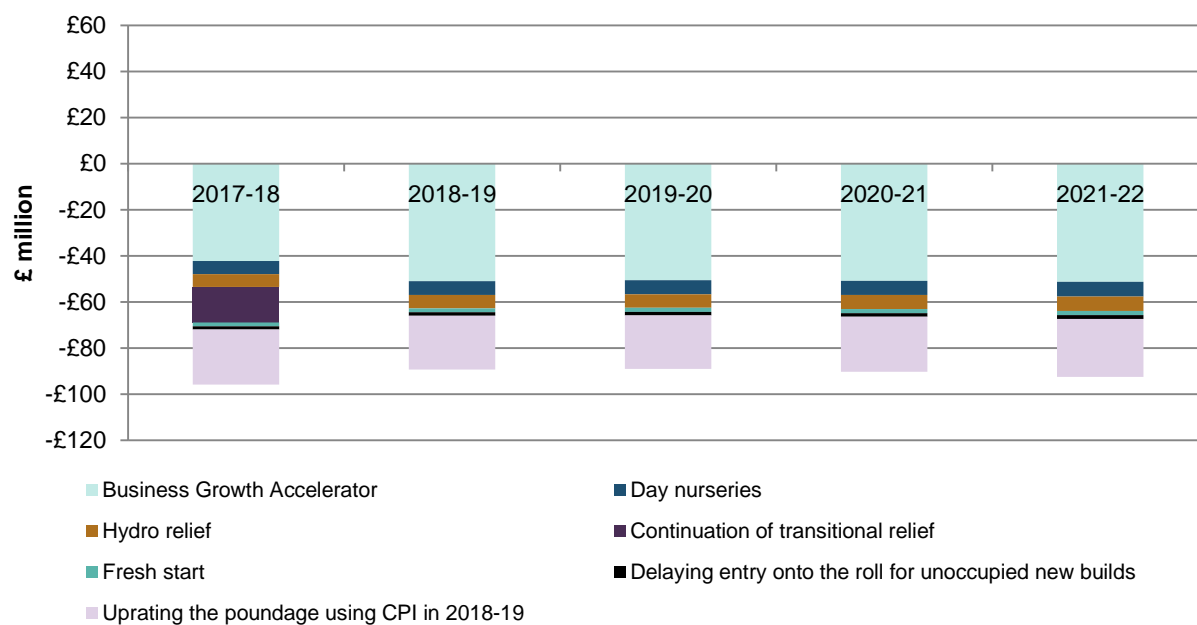
Non-Domestic Rates (NDR)

- 31 Our forecast of NDR for 2018-19 was £2,908 million in the absence of any policy changes by the Scottish Government. The Scottish Government has announced a number of policy measures in this Draft Budget which reduces the amount of NDR income collected by £96 million. Our final forecast for NDR income is £2,812 million in 2018-19.
- 32 Some of the policy measures were introduced in response to the recommendations of the Barclay Review, which reported in August of this year.⁵ the introduction of a 100 per cent relief for day nurseries, expansion of the Fresh Start relief, and the introduction of a new relief, named the 'Business Growth Accelerator' where new properties and existing properties after improvements or extensions do not pay rates on the increase in their rateable value for the first 12 months.

⁵ Report of the Barclay Review of Non-Domestic Rates, 22 August 2017 ([link](#))

- 33 The Scottish Government also announced new policies not deriving from the Barclay Review: a decision to uprate the rate of tax by the Consumer Price Index (CPI) in 2018-19, continuation of transitional reliefs from 2017-18, a new relief for hydro properties and new properties having entry on the valuation roll delayed until occupied.

Figure 10: Revenue effect of policy measures announced



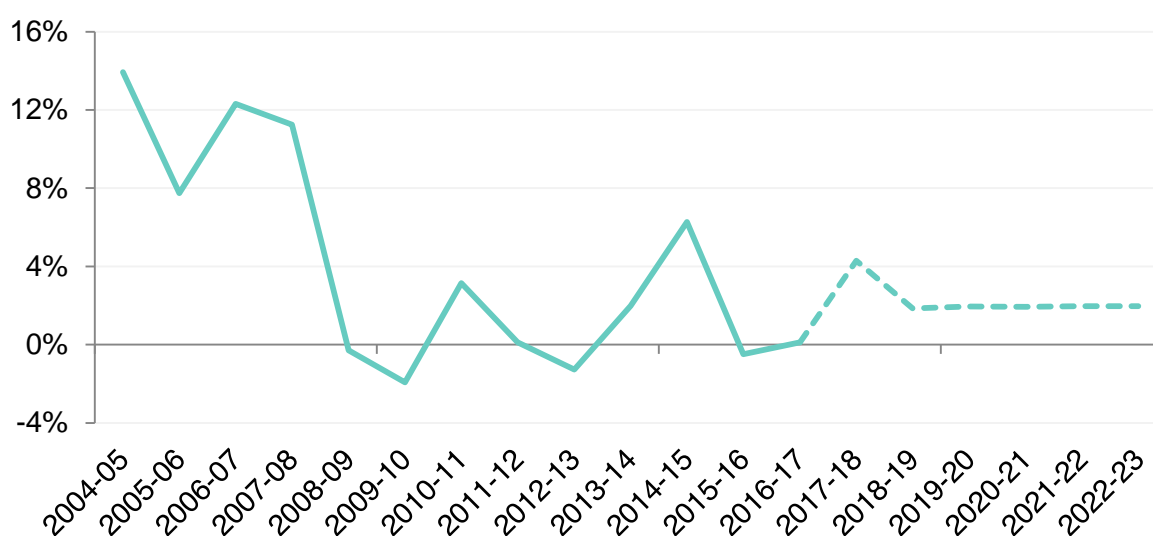
Source: Scottish Fiscal Commission

- 34 The Commission forecast what is known as the contributable amount of NDR. This can be thought of as the amount collected by local authorities through the course of the year which flows to the Scottish Government. The amount available to local authorities to spend – the distributable amount – is set by the Scottish Government prior to the start of the year, using our forecast of the contributable amount as a guide.
- 35 The Scottish Government uses the NDR Rating Account to manage the difference between the amount distributed to local authorities and expectations of the amount to be raised from NDR. Any differences can be managed between years rather than within a single year.
- 36 We estimate that the Rating Account will be in deficit by £153 million at the end of 2017-18. Given this estimated position, the Government may choose to set the amount distributed to local authorities in 2018-19 lower than our forecast of the contributable amount in an attempt to move the account closer to a balanced position.

Land and Buildings Transaction Tax (LBTT)

- 37 The Scottish housing market has shown signs of recovery in the first half of 2017-18, following low price and transactions growth in 2016-17. We expect 2017-18 as a whole to see robust growth both in prices and transactions. In the first half of the financial year house price growth has averaged 4.3 per cent and transactions growth 5.9 per cent relative to 2016-17. Our expectation is that this growth will continue into the second half of this year.

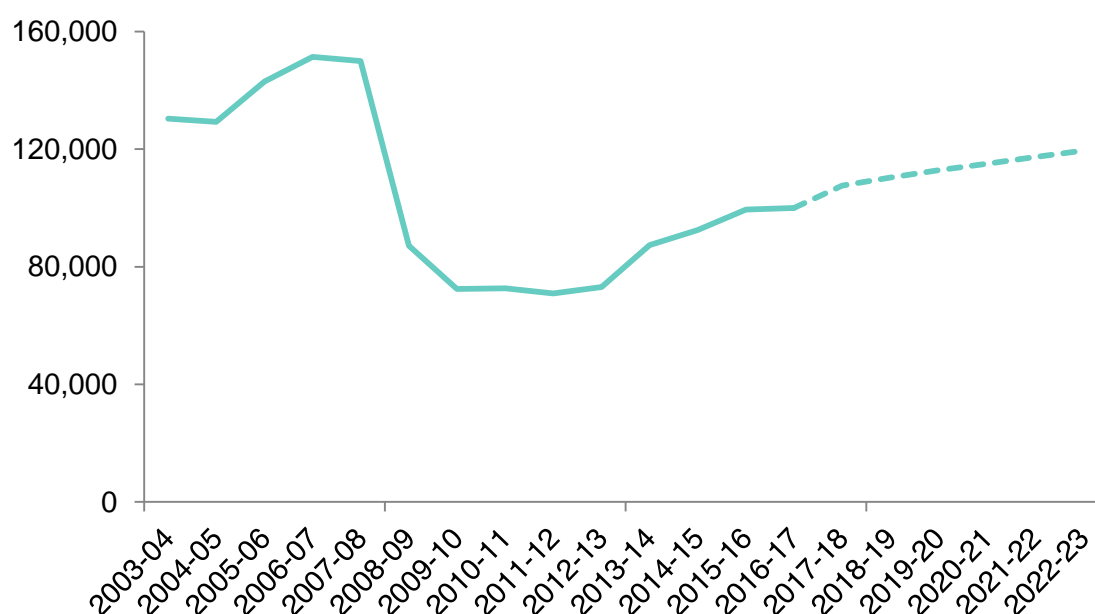
Figure 11: Scotland average house prices (annual per cent change)



Source: Registers of Scotland ([link](#)), Scottish Fiscal Commission

- 38 Across the five-year forecast horizon we assume house price growth to return to around 2 per cent a year, the average rate seen in Scotland since the financial crisis. Although the volume of transactions will remain significantly below pre-crisis levels, transactions are expected to increase over the forecast horizon as shown in Figure 12. These forecasts drive both our residential LBTT and ADS forecasts.

Figure 12: Scotland residential property transactions



Source: Registers of Scotland ([link](#)) Scottish Fiscal Commission

- 39 The Scottish Government has announced the introduction of a relief for First Time Buyers (FTBs) at this Draft Budget. This raises the zero rate tax threshold for FTBs from £145,000 to £175,000 from 1 June 2018. FTBs will pay up to £600 less in tax, depending on the value of their transaction.
- 40 The relief is expected to result in prices increasing for FTBs as the reduction in tax results in extra money put towards property purchases. The overall effect on the market is modest as FTBs benefiting from the reduction in tax account for only 10 per cent of the residential market. We expect there to be between 150 and 200 additional FTB transactions per year, displacing other transactions that would have taken place within the same price range (for example home movers and buy-to-let landlords).
- 41 The policy reduces residential LBTT revenue raised by on average £6 million per year in our forecast. The impact on ADS revenues is on average a £0.3 million reduction in revenue each year.⁶ Full details of the costing can be found in Annex A of our main report.
- 42 Non-residential receipts are forecast to increase gradually over the five-year forecast horizon. We expect that the non-residential market will see subdued activity in line with the OBR's weaker growth forecasts for the UK.

⁶ This reduction results from FTBs displacing the purchase of additional properties, which are subject to an additional 3 per cent surcharge.

Air Passenger Duty

- 43 Air Passenger Duty (APD) is paid by passengers departing from UK airports. The Scottish Government had legislated to replace APD with Air Departure Tax (ADT) from April 2018. The Scottish Government has now confirmed that devolution of APD will be postponed.⁷ The Commission has developed a forecast for Scottish APD receipts; we are publishing these forecasts to inform the future plans for devolution of APD.
- 44 Our forecast of Scottish APD receipts shows revenues increasing over the five-year horizon. Scottish passenger numbers have grown strongly in the last four years at a time when Scottish GDP growth has been relatively subdued. We expect this trend to continue with APD receipts increasing over the next five years.

Scottish Landfill Tax

- 45 Landfill tax is an environmental tax which has contributed towards a reduction in the amount of waste landfilled over the last decade. While this trend appears to have levelled off in Scotland in recent years, the Commission is forecasting significant reductions in the amount of waste landfilled and subsequent tax receipts over the next five years.
- 46 The forecast is largely driven by the projected increase in incineration capacity across Scotland over the forecast period. The build-up in capacity is in part a reaction to the increasing cost of the tax on disposal via landfill. It is also a sign that local authorities and waste management companies are beginning to plan ahead to meet their obligations in response to the ban on the landfill of biodegradable municipal waste from 2021. The full impact of the ban is still being assessed and may result in tax receipts being significantly lower in the later years of our current forecast.

Social security expenditure

- 47 As part of the devolution of social security powers to the Scottish Parliament, the Commission is required to produce independent official forecasts of social security expenditure in Scotland.

⁷ Letter from the Cabinet Secretary for Finance and Constitution to the Convener of the Finance and Constitution Committee 22 November 2017 ([link](#))

- 48 The benefits are being devolved following a phased timetable and the forecasts reflect either Scottish or UK Government policy, depending on the status of each benefit. The benefits already devolved are Discretionary Housing Payments, the Scottish Welfare Fund and employability services. Our forecasts of expenditure on these areas reflect current Scottish Government policy. Scottish Ministers will take responsibility for delivery of Carer's Allowance by summer 2018 and we have forecasted expenditure based on both UK Government's Carer's Allowance policy and the Scottish Government's interim Carer's Allowance Supplement.
- 49 The final group of benefits forecasted are those where the Scottish Government has announced plans for devolution, but the timetable and policy information are not sufficiently detailed for us to cost at this stage. These benefits are Funeral Payments, Healthy Start Vouchers and Sure Start Maternity Grant.⁸ For these benefits we are forecasting expenditure based on current UK Government policy.
- 50 As the Scottish Government announces plans for the devolution of further benefits we will include them in our future forecasts.

Table 6 Summary of social security forecasts 2016-17 to 2022-23

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Carer's Allowance	234	247	265	282	297	309	321
Carer's Allowance Supplement	0	0	35	30	32	33	34
Discretionary Housing Payments	50	60	61	62	63	65	66
Scottish Welfare Fund	33	33	34	35	35	35	35
Employability Services	0	11	24	27	27	18	3
Fair Start Scotland	0	0	18	27	27	18	3
Work Able Scotland	0	3	0	0	0	0	0
Work First Scotland	0	9	6	0	0	0	0
Funeral Payments	5	5	5	5	5	5	5
Healthy Start Vouchers	5	4	4	4	4	4	3
Sure Start Maternity Grant	2	3	3	3	3	3	3
Total Social Security	329	362	430	448	465	471	470

Source: Scottish Fiscal Commission

⁸ The Scottish Government have announced that Funeral Expense Assistance will replace Funeral Payments and the Best Start Grant will replace Sure Start Maternity by summer 2019.

- 51 Other than for the interim Carer's Allowance Supplement which is set out in the Social Security (Scotland) Bill, the Scottish Government's intention is to set out all detailed rules relating to eligibility criteria and rates of benefits in subordinate legislation. To support the Scottish Parliament and the public in understanding and scrutinising the Scottish Government's policy proposals, the Commission will aim to produce forecasts of expenditure to accompany subordinate legislation relating to any areas in our remit.

Carer's Allowance

- 52 Carer's Allowance (CA) is paid to help people who care for someone who is severely disabled. Expenditure on CA is forecast to increase over the horizon because of both increases in caseload and the weekly rate increasing in line with CPI inflation.
- 53 The Scottish Government have committed to introducing a Supplement to CA in 2018-19 to increase CA to match the rate of Jobseekers Allowance (JSA). The Supplement will be paid as two lump-sum payments a year, each worth six months of the difference between CA and JSA. The Scottish Government and DWP have not finalised the timetable. Despite this, we have sufficient information to produce an illustrative costing.
- 54 We expect the cost of the Supplement to fall from £35 million in 2018-19 to £30 million in 2019-20: this is because of JSA being frozen at £73.10 per week while CA is increased with inflation. From 2020-21 onwards the cost of the Supplement gradually increases as the freeze on JSA is removed and the caseload increases.

Discretionary Housing Payments

- 55 Discretionary Housing Payments (DHPs) are grants awarded by local authorities to people in need of extra financial assistance with housing costs. The Scottish Government has committed to using DHPs to mitigate the removal of the spare room subsidy (RSRS), commonly known as the bedroom tax. Our forecasts show the cost of mitigating the RSRS increases over the forecast horizon, from £50 million in 2018-19 to £55 million in 2022-23. Based on Scottish Government policy, we assume other expenditure on DHPs remains constant at £10.9 million a year over the forecast horizon.

Scottish Welfare Fund

- 56 The Scottish Welfare Fund (SWF) was set up in April 2013 and provides grants for people on low incomes. Expenditure on the SWF has been constant at £33 million since 2013. Our forecast assumes this remains constant. The Scottish Government has committed to using the SWF to mitigate UK Government changes to the housing component of Universal Credit for some 18 to 21 year olds. Our forecasts estimate that expenditure on this policy will be £1.2 million in 2018-19, increasing to £1.6 million from 2020-21 onwards.

Employability Services

- 57 The Scottish Government has introduced new voluntary services to provide employability support to help the long-term unemployed and people with disabilities to find sustainable employment. Two interim services are operational in 2017-18; Work First Scotland and Work Able Scotland. The Fair Start Scotland service starts in April 2018 and will accept referrals for three years.
- 58 The service is run by providers who are paid according to the number of people that move into sustained employment. Performance fees are paid upon participants reaching 13, 26 and 52 weeks of sustained employment.
- 59 Forecast expenditure is based on the service design, the estimated number of individuals supported and the probabilities of those individuals entering into and sustaining employment. Our current forecasts reflect expenditure in both the three years the service is open to new referrals, and expenditure in the subsequent two financial years while participants are receiving support and then in employment.
- 60 We are forecasting expenditure on the two transition schemes for both the current year, 2017-18, and the next financial year, 2018-19. Expenditure on Fair Start Scotland will occur in six financial years, 2017-18 to 2022-23. Expenditure on the employability services is highest in 2020-21 at £27.2 million.

Other benefits

- 61 The Scottish Government has announced plans for the devolution of Funeral Payments, Healthy Start Vouchers and the Sure Start Maternity Grant. Currently there is insufficient detail for us to produce forecasts based on the

Scottish Government's policy. We have therefore produced forecasts of expenditure based on current UK Government policy. Once details of devolution become clearer we will produce updated forecasts.

- 62 Universal Credit (UC) is reserved to the UK Government and we do not directly forecast expenditure. UC is a qualifying benefit for several of the benefits we forecast so any delays or changes to the rollout could impact on our forecasts.

Borrowing

- 63 The Scottish Government has provided projections of its borrowing requirements to the Commission. We have assessed these borrowing plans as being reasonable, which means they are within the limits set out in the Fiscal Framework.



Chapter 1

Introduction

What is in this report?

- 1.1 This report presents economic and fiscal forecasts to inform the Scottish Budget Process for 2018-19. This is the first set of official, independent forecasts produced by the Scottish Fiscal Commission. The Commission is required to produce these forecasts to inform the Scottish Draft Budget, as set out in the Scottish Fiscal Commission Act 2016.
- 1.2 Alongside the Commission's forecasts, the report provides a full explanation of all assumptions and judgements made as part of the forecasting process. We also set out what has changed since the last set of forecasts that were produced, in this case by the Scottish Government as part of the Budget 2017-18 process.
- 1.3 The report is divided into the following sections:
 - Summary – a standalone, non-technical, high-level summary of the forecasts produced by the Commission, and the main assumptions and judgements that underpin them.
 - Economy Chapter – a chapter which sets out the Commission's five-year forecasts for the Scottish economy, including the underlying judgements and sensitivity analysis where appropriate. This includes an assessment of whether the Commission has forecast a 'Scotland-specific economic shock' which would mean that the Scottish Government would be able to access additional borrowing under the terms of the Fiscal Framework.

- Tax Chapter – a chapter presenting the Commission’s five-year forecasts of receipts from the fully and partially devolved taxes within our remit, covering:
 - Non-Savings Non-Dividend Income Tax
 - Non-Domestic Rates
 - Land and Buildings Transaction Tax
 - Scottish Landfill Tax
 - Scottish share of Air Passenger Duty
- Social Security Chapter – a chapter presenting the Commission’s forecasts for devolved social security expenditure:⁹
 - Carer’s Allowance and the Carer’s Allowance Supplement
 - Discretionary Housing Payments
 - Scottish Welfare Fund
 - Employability Services
 - Funeral Payments
 - Healthy Start Vouchers
 - Sure Start Maternity Grant
- Borrowing Chapter – A chapter which fulfils the Commission’s duty to assess whether the Scottish Government’s projections of borrowing are reasonable. The Government’s spending and borrowing plans are assessed against the limits set out under Scotland Act 2016 and the associated Fiscal Framework.
- Annex A: Policy Costings – An Annex containing detail for all the policy costings the Commission has produced for this set of forecasts. This shows how much any individual policy will cost or raise, and how the Commission has arrived at that estimate.

Limitations of forecasting

- 1.4 The future is highly uncertain. The past is an imperfect guide to the future in a rapidly changing global economic, social, political and technological environment. Analytical models, based on historic data and theory, can help provide some insight into how the economy and public sector finances may change over time, but all have limitations. Forecasts cannot perfectly predict the future – the Commission’s forecasts aim to present a balanced pathway through a broad range of possible outcomes.

⁹ The Commission’s specific role is defined in the Scottish Fiscal Commission (Modification of Functions) Regulations 2017 ([link](#))

- 1.5 There will exist a range of valid approaches on each of these issues and so the Commission is required to make judgments where appropriate. Forecasting is an on-going process of intelligence gathering, learning from previous forecasts, reflection and refinement. Judgements will be made on the basis of the best evidence and intelligence available at the time of publication, but may change from one forecast to the next as the economy evolves and our understanding develops along with it.

Box 1.1: OBR Forecasting – uncertainties and challenges

The Office for Budget Responsibility (OBR) is the UK Independent Fiscal Institution (IFI) which was established in 2010. Twice a year they provide a detailed central forecast for the economy and the public finances. These forecasts are designed to provide a transparent benchmark against which to judge the significance of new economic and fiscal data, and against which to estimate and explain the likely impact of policy decisions.

The OBR emphasise in every Economic and Fiscal Outlook¹⁰ that since the future can never be known with precision, all such forecasts are necessarily surrounded by uncertainty – “the likelihood that any given forecast will turn out to be accurate in all respects is essentially negligible”. Like many IFIs, the Commission is required to evaluate its forecasts. Similarly the OBR produce an evaluation of their forecasts once a year in their Forecast Evaluation Report (FER).¹¹

The OBR seek to present this uncertainty at each fiscal event.¹² In common with many forecasters the OBR publish a ‘fan chart’ such as Figure 1.1 that illustrates the uncertainty in their economy forecast. These charts are usually drawn using information on historical forecast errors. As this is the Commission’s first forecast we are not in a position to provide similar charts.

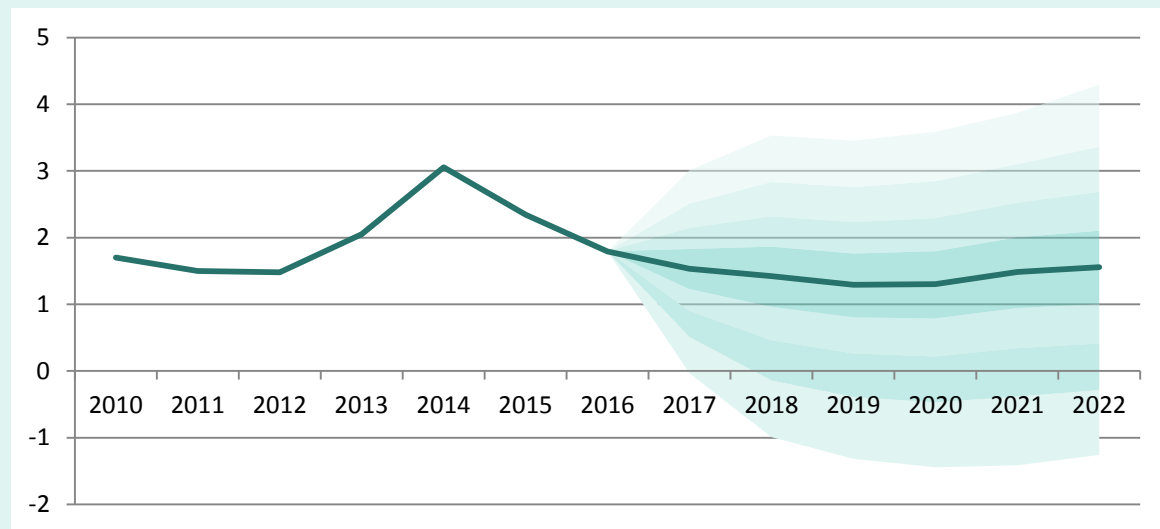
However, the Commission will follow the OBR and many other forecasters in giving an insight to forecast uncertainty by discussing the sensitivity of our forecasts to alternative assumptions and the risk factors for our forecasts.

¹⁰ OBR (2017) Economic and Fiscal Outlook, November 2017 ([link](#))

¹¹ OBR (2017) Forecast Evaluation Report, October 2017 ([link](#))

¹² OBR (2012) Briefing Paper 4: How we present uncertainty, June 2012 ([link](#))

Figure 1.1: OBR's GDP growth forecast



Source: OBR (2017) Economic and Fiscal Outlook, November 2017 ([link](#))

Background to the Commission

1.6 In April 2017 the Scottish Fiscal Commission became responsible for producing independent economic and fiscal forecasts to inform the Scottish Budget.

1.7 The Commission will produce independent forecasts of:

- Revenue from fully devolved taxes;
- Non-savings non-dividend income tax receipts;
- Onshore Gross Domestic Product (GDP) in Scotland; and
- Devolved social security expenditure.¹³

1.8 The Commission will produce forecasts at least twice a year. We will also produce annual Forecast Evaluation Reports, and will from time to time publish working papers on related subjects.

1.9 The Scottish Fiscal Commission is structurally and operationally independent of the Scottish Government. More details about the remit and history of the Commission, including previous publications, can be found on our website: www.fiscalcommission.scot.

¹³ The Commission's specific role in social security forecasting is defined in the Scottish Fiscal Commission (Modification of Functions) Regulations 2017 ([link](#))

- 1.10 The Commission was previously a non-statutory body, established in 2014 to scrutinise Scottish Government forecasts of devolved taxes following the Scotland Act 2012. In December 2016, the Commission found the Scottish Government's forecasts of non-savings non-dividend Income Tax, Land and Buildings Transaction Tax and Scottish Landfill Tax to be reasonable. We also had a role in scrutinising the buoyancy and inflation elements of the Non-Domestic Rates forecast, which we also found to be reasonable.¹⁴

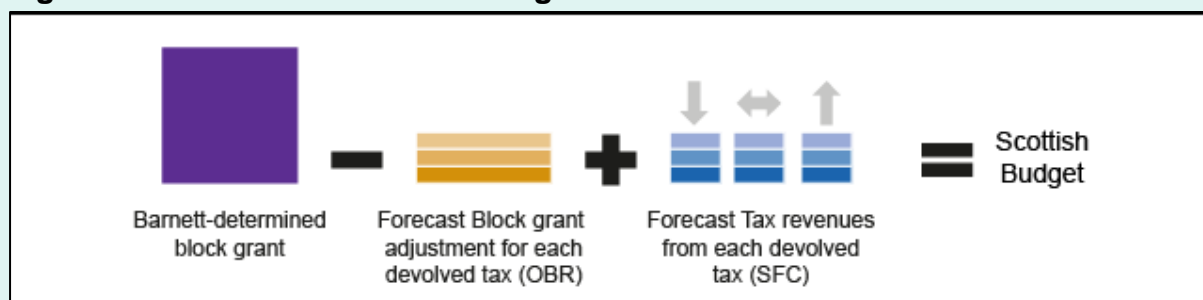
Box 1.2: Commission Forecasts and the Fiscal Framework

The Scottish Fiscal Commission's forecasts are an important component in determining the total budget that is available to the Scottish Government to spend in each fiscal year. However, it is important to remember that they are not the only relevant forecasts.

The diagram below presents a stylised representation of the way the Scottish Budget will be determined under the Fiscal Framework agreed alongside the Scotland Act 2016. The forecast block grant adjustment changes are based on OBR forecasts of UK Government receipts of corresponding taxes, they do not relate to the OBR's forecasts of Scottish taxes. These UK Government receipts forecasts are then used by the UK and Scottish Government to calculate the block grant adjustments, in which process the OBR has no involvement.

There is one exception to the general picture, which arises in this year's income tax calculation. See more details on this in Box 3.2 in the tax chapter for more details.

Figure 1.2 How is the Scottish Budget Determined?



Source: SPICe Briefing (2017) UK Autumn Budget 2017 – impact on Scotland ([link](#))

Taxes which were devolved before the Scotland Acts 2012 and 2016, such as Council Tax and Non-Domestic Rates Income (NDRi), are outwith the Fiscal Framework and so have no impact on the Block Grant. This means there is no indexation mechanism with equivalent UK Government taxes. The Commission has been tasked with producing a forecast of NDRi, but is not responsible for forecasting Council Tax.

¹⁴ Scottish Fiscal Commission (2016) non-statutory Report of Draft Budget 2017-18 ([link](#))

Budget Process

- 1.11 In developing these forecasts, the Commission has engaged with the Scottish Government by following the process set out in the agreed and published Protocol between the organisations.¹⁵ As set out in the Protocol, the process of engagement has been different in this year's cycle from the process followed last year by the non-statutory Commission.
- 1.12 In summary, since formal notification of the Draft Budget date in early October, the Commission has had several rounds of meetings to discuss our pre-measures forecasts. These have included discussions with the Scottish Government, Revenue Scotland, the Office for Budget Responsibility, HMRC and SEPA. As outlined in the Protocol, the Commission had confidential discussions with the Scottish Government to share proposed policy measures for the Scottish Draft Budget, to allow the Commission to cost these policies.
- 1.13 On 28 November the Commissioners agreed to a request from the Scottish Government to extend the deadline for providing finalised policy measures by one day from the day specified in the Protocol (30 November). There was a corresponding one working day extension of the deadlines for the Commission to present its final forecasts to the Government and for sharing its report with the Cabinet Secretary.
- 1.14 Headline dates of interest are:
- 1 December: The Scottish Government presented the Commission with all finalised policy measures.
 - 6 December: The Commission presented the Scottish Government with final forecasts to allow the SG to finalise Draft Budget 2018-19.
 - 11 December: The Commission's report was shared with the Cabinet Secretary for Finance and Constitution.
 - 12 December: Formal Meeting between Lady Rice, Chair of the Commission and Cabinet Secretary took place
 - 14 December: Commission report published.
- 1.15 In accordance with the Protocol, more detail of timings and attendees at different rounds of meetings is published on our website.¹⁶

¹⁵ Protocol for engagement between the Scottish Fiscal Commission and the Scottish Government published April 2017 ([link](#))

¹⁶ Scottish Fiscal Commission (2017) Scottish Economic and Fiscal Forecasts December 2017 ([link](#))

Professional Standards

- 1.16 The Commission is committed to fulfilling our role as an Independent Fiscal Institution (IFI), in line with the principles set out by the OECD for these institutions.¹⁷
- 1.17 The Commission also seeks to adhere to the highest standards for analysis possible. While we do not produce official statistics as we produce forecasts, the Commission and our work voluntarily complies as much as possible with the principles of the Code of Practice for Official Statistics.
- 1.18 The draft refreshed Code of Practice sets out three key pillars: Trustworthiness, Quality and Public Value.¹⁸ These provide a useful framework for the Commission to demonstrate voluntary compliance with many parts of this code. This is set out in Table 1.1 below.

Table 1.1: Voluntary Compliance with the Code of Practice

Trustworthiness – trusted people, systems and processes	<p>The Commission is accountable to the Scottish Parliament. The members of the Commission are appointed by the Scottish Parliament after being nominated by the Cabinet Secretary and the Finance and Constitution Committee.</p> <p>The Commission has recruited professional analysts from a variety of different backgrounds, including the UK and Scottish Civil Service. As a new organisation, we have also had discussions with the Government Statistical Service (GSS), to ensure professional statistical standards are maintained and continuous professional development offered.</p> <p>The Commission has a designated person responsible for ensuring voluntary adherence to the Code of Practice.</p> <p>The Commission has robust processes to protect data confidentiality, to ensure legal obligations are met.</p> <p>The Commission has published a joint Protocol with the Scottish Government, which sets out the way we interact with the Government during fiscal event periods.</p>
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¹⁷ OCED Recommendation on Principles for Independent Fiscal Institutions ([link](#))

¹⁸ Draft Code of Practice for Statistics Edition 2.0 ([link](#))

Quality – robust data, methods and processes	<p>The Commission has a statutory duty to make explicit all judgements and assumptions that underpin our forecasts.</p> <p>We seek throughout our reports to be transparent about methods and data used, sources of uncertainty and the sensitivity of the forecasts to different assumptions.</p> <p>We draw on the best available sources of information, using statistics that are designated as National or Official Statistics where possible. Where required, we will note any uncertainties or limitations in data sources used.</p>
Public Value – statistics that serves the public good	<p>The Commission’s forecasts are used in the calculation of the Scottish Government’s Budget. They are used by Parliament in the scrutiny of the Government’s Budget, to inform debate and increase the stock of fiscal information available to policy makers.</p> <p>The Commission makes available all its forecasts, and determinants of its forecasts, in forms that encourage reuse.</p> <p>The Commission will develop publications and analysis in response to user demand.</p>

Comments & Contact

- 1.19 This is the first set of forecasts produced by the Commission. We welcome comments from users about the content and format of our publications. In particular, if there are particular analyses, or disaggregations of data which users would find useful as part of future forecast reports, please let us know.
- 1.20 All charts and tables in this publication have also been made available in spreadsheet form on our website.¹⁹ If you have any feedback, or would like to request further information about any of our analysis, please email info@fiscalcommission.scot.

¹⁹ Scottish Fiscal Commission (2017) Scottish Economic and Fiscal Forecasts December 2017 ([link](#))



Chapter 2

Economy

Introduction

- 2.1 This chapter outlines the Commission's economy forecasts, providing the headline forecasts set within the wider economic context for Scotland.
- 2.2 The economy forecasts are created for two reasons:
- To fulfil the Commissions remit of providing quarterly onshore GDP growth forecasts²⁰ for the next two years; and,
 - To provide information on the economic variables that feed into the Commission's fiscal forecasts, such as wages, employment and hours worked that are used in the income tax forecast.
- 2.3 In constructing our forecast the Commission has considered the long run evolution of the economy, particularly productivity and potential output; the short run forecasts based on recent outturn and survey data; and how the short and long run forecasts are brought together in the medium run through the relationship between output and the output gap. The chapter proceeds as follows:
- Forecast context and summary
 - Key assumptions and judgements
 - The long run: potential output and productivity
 - Short run forecasts
 - The medium term outlook and the output gap

²⁰ Onshore GDP is used as shorthand in referring to Scotland's GDP excluding the value of oil, gas and other hydrocarbons produced in the Scottish sector of the UK continental shelf as defined in the Scottish Fiscal Commission Act 2016 ([link](#)). This is the same basis as the headline GDP figures published by the Scottish Government ([link](#)). For further information, see Box 2.1.

- Second round effects
- Forecast sensitivities
- Comparison to previous forecasts
- Comparison to OBR UK forecasts

2.4 The forecasts were produced in line with the methodology set out in the Commission's Current Approach to Forecasting paper published in September 2017.²¹ A technical paper describing the Commission's methodology will be published next year.

2.5 The economy forecasts were finalised on 27 November. This was to allow a stable baseline on which to create fiscal policy. New data and information published after this date are not included in the forecast.

Forecast context and summary

2.6 This section:

- puts the Commission's forecasts in the context of recent economic performance
- provides an overview of the Commission's economy forecasts
- provides key headline forecast numbers and an assessment of whether or not access to additional borrowing powers will be triggered by a Scotland-specific economic shock

2.7 The Commission's core view is that Scottish economic growth is well below the levels seen in the decades leading up to the 2008 financial crisis. Without strong evidence to the contrary, we expect the factors leading to this lower level of growth to persist over the next five years. The most important factor is slow growth in productivity. The reasons behind slow growth in productivity are not unique to Scotland and are not yet fully understood. A discussion on the Commission's view on productivity is provided from paragraph 2.95.

2.8 The general slowdown in economic growth observed in recent years would, on its own, be sufficient to warrant a forecast lower in the near term than previous norms. The Commission also considers Scotland's specific circumstances over the next five years, looking at both the upside and downside uncertainties facing the economy. On balance, we judge that the downsides outweigh the upsides. This means that, in the Commission's view, the period of slower growth is unlikely to come to an end in the near future. These downsides include the UK's changing relationship with the EU, weak

²¹ Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

demand from activity in the UK Continental Shelf driven by low oil prices, and Scotland's industrial and demographic structure.

- 2.9 Our forecasts of economic growth for Scotland are lower than forecasts of UK growth prepared by the OBR. Despite low economic growth, we do not forecast that a Scotland-specific economic shock, as defined by the Fiscal Framework, will be triggered.
- 2.10 Recent, historically high population growth and strength in the labour market, amongst other factors, have helped mask the slowing of productivity growth. With population growth in Scotland expected to slow in the coming years, and the labour market already at historic highs, there is limited room for these factors to contribute further to growth. Economic growth in Scotland will now have to be driven by productivity growth. Trend productivity growth has been slowing in Scotland since 2004. The Commission's judgement is that this slow growth in productivity will continue in the near term, before gradually starting to increase towards historic levels towards the end of the five-year forecast. As a result, the Commission expects growth in GDP to average 0.9 per cent over the five-year forecast.
- 2.11 The labour market continues to perform well in Scotland. The share of the population in employment has recently reached record highs and the unemployment rate has been at record lows. While labour market gains have been a source of growth in Scotland in recent years, the Commission's judgement is that the labour market is now reaching capacity, offering limited scope for further gains.
- 2.12 Accompanying slower growth in productivity, wages have grown more slowly, in both real and nominal terms, than might have previously been expected over the last decade. Real wage growth has recently slowed to near zero in both Scotland and the UK because of rising inflation. Given very low levels of unemployment, rising inflation should start to feed into modest nominal wage growth in the near term and this is reflected in the Commission's forecasts. However, real wages are expected to return to only slow growth of around 1 per cent.
- 2.13 The Commission expects the labour market to continue its recent resilience, with the employment rate expected to continue to increase over the forecast horizon, though not at the same speed as achieved over the last five years.
- 2.14 An outlook of slow growth is the Commission's core view. It is based on analysis of historic trends and a broad assumption that these trends continue in the near future. The Commission also makes a number of judgements about the impact of additional factors, such as the UK's future relationship with the EU. As with all forecasts, there is a significant degree of uncertainty,

and the Scottish economy could surprise in either direction because the underlying trends change unexpectedly, or the outcome of certain events is different than expected. The final section of this chapter explores some of the key judgement sensitivities around the core forecast.

- 2.15 In general, we present our economic forecasts on a financial year basis, as this is required for the fiscal forecasts.²² To aid comparisons with other forecasters we also calendar year forecasts for the headline economy forecasts. Table 2.1 presents our headline forecasts of GDP, employment and annual earnings on a calendar year basis.

Table 2.1: Headline economy forecasts, calendar year

	2016 Outturn	2017	2018	2019	2020	2021	2022
GDP (% growth)	0.4	0.7	0.7	0.9	0.6	0.9	1.1
Employment (millions)	2.61	2.64	2.66	2.66	2.66	2.66	2.67
Earnings (% growth)	3.2	2.0	2.2	2.4	2.6	2.8	3.1

Source: Scottish Fiscal Commission, Labour Force Survey ([link](#)), Quarterly National Accounts Scotland ([link](#))

- 2.16 The supplementary economy tables published alongside this document provide key economy forecast series at calendar year, financial year and quarterly time periods. For the remainder of this chapter, the financial year basis is used.
- 2.17 Table 2.2 presents the Commission's headline annual economy forecasts focusing on GDP, the labour market and earnings on a financial year basis.

²² Financial year basis is the four quarter period Q2 – Q1. For example, financial year 2018-19 is the period from 2018 quarter 2 to 2019 quarter 1.

Table 2.2: Headline economy forecasts, constant prices, financial year (% change on previous financial year unless otherwise stated)

Headline	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Outturn							
GDP	0.4	0.7	0.8	0.9	0.6	1.0	1.2
Output Gap (% of GDP)	0.3	0.4	0.4	0.3	0.0	-0.1	-0.1
Components of GDP							
Domestic Demand	0.4	0.4	0.7	0.8	0.6	0.9	1.1
Household Consumption (1)	0.8	0.9	0.3	0.1	0.4	0.9	1.4
Government Expenditure (2)	0.7	2.1	1.3	2.0	1.0	1.1	1.1
Private investment (3)	-1.7	-5.2	1.1	1.1	0.6	0.3	0.2
Exports	-2.1	-0.2	1.0	0.9	0.9	1.0	1.0
Imports	-1.7	-0.6	0.7	0.8	0.8	0.9	1.0
Net Trade (% of GDP)	-10.6	-10.6	-10.3	-10.2	-10.1	-10.1	-10.0
Labour market							
Nominal wages (4)	2.9	2.0	2.3	2.4	2.6	2.9	3.2
Real wages	1.4	-0.4	0.2	0.5	0.6	0.9	1.2
Average earnings (5)	3.1	1.8	2.3	2.4	2.6	2.9	3.2
Total Population (thousands)	5,408	5,432	5,453	5,471	5,487	5,501	5,513
Population of working age (thousands)	3,490	3,496	3,496	3,494	3,489	3,482	3,474
Employment (thousands)	2,614	2,655	2,658	2,658	2,661	2,666	2,670
Unemployment (%)	4.8	3.9	4.2	4.4	4.5	4.5	4.5

Source: Scottish Fiscal Commission

1. Includes a statistical residual from deflating GDP(E) current prices data

2. Includes Government consumption and investment expenditure

3. Gross capital formation in the private sector

4. Nominal wages is hourly pay, estimated as compensation of employees divided by total hours worked

5. Earnings is average annual earnings from employment, specifically the product of hourly pay and average annual hours worked

2.18 The Fiscal Framework provides additional borrowing powers for Scotland in the event of a Scotland-specific economic shock.²³ The Fiscal Framework defines an economic shock as annual GDP growth of below one per cent and GDP growth in Scotland one percentage point below GDP growth in the UK.

2.19 The Commission is required to present quarterly GDP growth figures for the first two years of the forecast and an assessment of whether or not a Scotland-specific economic shock, as defined by the Fiscal Framework, is expected to occur. Table 2.3 presents the Commission's forecasts of quarterly

²³ See The Agreement Between the Scottish Government and the United Kingdom Government on the Scottish Government's fiscal framework (2016) ([link](#))

GDP growth and provides analysis of whether this would be considered a Scotland-specific economic shock.

- Criterion 1: 4Q-on-4Q growth in Scotland is below 1.0 per cent
- Criterion 2: 4Q-on-4Q growth in Scotland is 1.0 percentage point below the UK

Table 2.3: Assessment of Scotland-specific economic shock

4 Quarter Growth Periods		4Q on 4Q growth in GDP (%)		Criteria		Shock
4 quarter period	Compared to	SFC Dec 2017 Scotland	OBR Nov 2017 UK	1	2	
2017Q2 - 2018Q1	2016Q2 - 2017Q1	0.7	1.5	Y	N	N
2017Q3 - 2018Q2	2016Q3 - 2017Q2	0.7	1.4	Y	N	N
2017Q4 - 2018Q3	2016Q4 - 2017Q3	0.8	1.4	Y	N	N
2018Q1 - 2018Q4	2017Q1 - 2017Q4	0.7	1.4	Y	N	N
2018Q2 - 2019Q1	2017Q2 - 2018Q1	0.8	1.4	Y	N	N

Source: Scottish Fiscal Commission, OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

2.20 The Commission's assessment is that a Scotland-specific economic shock, as defined by the Fiscal Framework, is not expected to occur. While the Commission forecasts growth in Scotland to be below one per cent, we forecast the difference to the OBR's UK forecast to be less than one percentage point.

Key assumptions and judgements

2.21 This section:

- Sets out the key assumptions and judgements we made as part of our forecasting process;
- Sets out the Commission's assumptions with respect to the rest of the UK; and,
- Discusses the impact of the changing UK relationship with the EU on the forecasts and the associated assumptions made by the Commission.

Key judgements

2.22 Table 2.4 summarises the key judgements the Commissioners make about the Scottish economy over the next five years. These are subsequently discussed in further detail.

Table 2.4: Key economy forecast judgements

Issue	Judgement
1. The output gap	The economy is broadly on trend but operating slightly above capacity. That is, actual output is judged to be above potential output, with a small positive output gap of 0.4 per cent in 2017-18
2. Trend productivity	Annual growth of 0.5 per cent in 2018-19, increasing linearly to 1.0 per cent by 2022-23
3. Trend unemployment rate	Flat at 4.5 per cent over the whole forecast period
4. Population projections	ONS 2016-based population projections 50 per cent EU migration variant
5. Forecasts of the UK	OBR UK Autumn Budget 2017 forecasts
6. Changing UK-EU relationship	Similar to the OBR: <ul style="list-style-type: none"> • The UK leaves the EU in March 2019 • New trading arrangements with the EU and others slow the pace of import and export growth • The UK adopts a tighter migration regime than that currently in place • Slower productivity growth
7. Impact of UK Continental Shelf Oil & Gas activity on the onshore economy	Limited growth in capital and operational expenditure in the UKCS will mean that less demand will be generated in the onshore Scottish economy by offshore activities than in the period 2010 to 2014
8. Savings ratio	Broadly flat over the forecast
9. Second round effects	No second round effects are quantified in the economy forecasts though the announced public sector pay policy is an upside risk to the forecast

Source: Scottish Fiscal Commission

Assumptions relating to the rest of the UK

2.23 There are two different kinds of UK factors that influence the Scottish economy and which have been considered by the Commission:

- The impact of economic activity in the rest of the UK on Scotland via, for example, trade between Scotland and the rest of the UK; and,

- The impact on Scotland of economic factors that are common, or at least strongly correlated, across the whole of the UK, such as interest rates, prices and exchange rates.

2.24 The Commission does not produce forecasts for the UK as a whole. The OBR is the official and independent forecaster for the UK. The Commission has used the OBR's forecasts from the UK Autumn Budget 2017 as a starting point for their consideration of UK economic factors that affect Scotland.²⁴ It is the judgement of the Commissioners that the OBR forecasts represent a suitable set of projections to use in the preparation of their forecasts.

2.25 Table 2.5 shows the UK economic factors that are used as part of the Commission's economy forecasting process. These are split into the two types described above.²⁵

Table 2.5: OBR UK forecasts used in the Commission's Scottish economic forecasts

Rest of UK impacts via trade	Whole of UK – Scottish common factors
UK GDP growth	UK prices
UK trade	UK exchange rate
UK Government spending	UK export market growth
UK labour market	World oil prices

Source: Scottish Fiscal Commission

Impact of the UK's changing relationship with the EU

2.26 On the 23 June 2016 the UK electorate voted to leave the EU. On 29 March 2017, the British Government invoked Article 50, triggering the process for the UK to begin leaving the EU by March 2019. At the time of preparation of our forecasts, the outcome of this process remains uncertain.

2.27 At present, there is no meaningful basis for predicting any particular end-point of this process on which to base our forecast. Even given a particular end-point of the negotiation process, the economic and fiscal implications would still be highly uncertain.

²⁴ OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

²⁵ No attempt is made to make forecasts of Scotland sum to, or constrain Scottish forecasts to UK totals. For example, in theory, if a forecast for rest of the UK (rUK) were available, the forecasts of Scotland + rUK should equal whole of UK. The Commission uses some forecasts for the UK as a whole, but takes no view on rUK, and therefore no attempt is made to constrain forecasts in this way. Instead, the Commission is interested in how growth in the rest of the UK (with forecasts for the UK as a whole used as proxy for this), affects, for example, Scottish trade.

- 2.28 In response to this uncertainty, the OBR uses broad-brush assumptions about the outcome of the negotiation process and the impact on the UK economy. These assumptions are that:
- The UK leaves the EU in March 2019;
 - New trading arrangements with the EU and others slows the pace of import and export growth; and,
 - The UK adopts a tighter migration regime than that currently in place.
- 2.29 The Commission's judgement is that the OBR's broad-brush assumptions are a suitable starting point for capturing the potential impacts on Scotland.
- 2.30 The Commission has adopted a similar set of assumptions about both the potential outcome of the negotiation process and the resultant impact on the economy. These reflect a range of potential outcomes and impacts. The Commission is not attempting to pinpoint the exact impact of UK-EU exit on the Scottish economy. Nor does the Commission consider a counter-factual case of no UK-EU exit. The Commission's focus is the impact on the economy over the forecast horizon of five years. The full impacts of the UK-EU exit, both positive and negative, are likely to play out over a much longer time horizon.
- 2.31 Following these basic assumptions, the Commission broadly captures the impact through three channels:
1. Impact on migration – the Commission uses the ONS 50 per cent EU migration variant, with projected lower EU migration than in the principal projection
 2. Impact on productivity – the Commission forecasts slow growth in productivity
 3. Impact on trade – Using OBR assumptions, the Commission forecasts slower growth in Scottish international trade
- 2.32 These are discussed in more depth in the next sections. The Commission's judgement on the UK-EU negotiations was formed based on information available up to the time of the economy forecasts closing on 27 November. New information arising since this date and before publication of this report would not significantly alter the Commission's view.

The long run, productivity and potential output

2.33 In order to forecast the economy over the longer term, the Commission's modelling seeks to identify underlying trends, rather than assess shorter-term volatility. Our outlook for long-run trend growth in Scotland is summarised in our assessment of the potential output of the economy. The main drivers of potential output are population, the labour market and productivity.

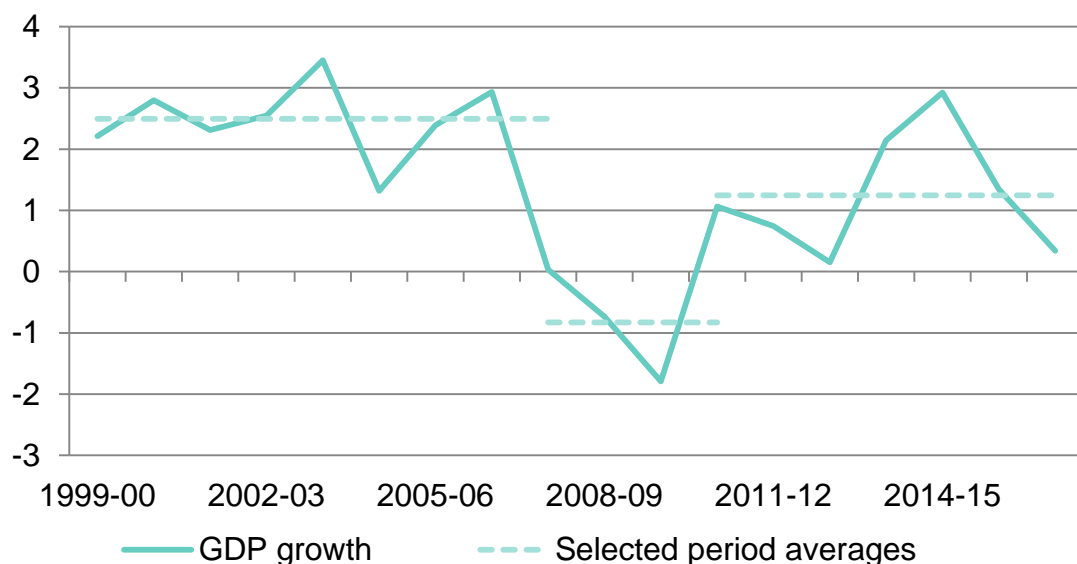
2.34 This section presents:

- The Commission's analysis of longer term Scottish economic trends
- The Commission's judgement on long term potential output, including our view on productivity

Underlying trends in the Scottish economy

2.35 Figure 2.1 shows the headline GDP growth rate since 1999-00.

Figure 2.1: Headline Scottish GDP and selected period averages, financial year growth rate (%)



Source: Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)), Scottish Fiscal Commission

2.36 This suggests that recent GDP growth falls into three distinct periods:

- **1998-99 to 2006-07:** This was a period of stability and consistently strong growth with GDP growing at an average of around 2.5 per cent per year. Further information shows generally stable growth rates of around 2 per cent in many developed economies, including Scotland and the UK, going back to the 1960s.
 - **2007-08 to 2009-10:** The financial crisis led to the economy shrinking for two years, with growth of -1.8 per cent in 2009-10
 - **2010-11 to 2016-17:** Since 2010, GDP growth has averaged 1.2 per cent per year
- 2.37 Following the 2008 recession, GDP growth has consistently underperformed expectations. There is some evidence to suggest that growth may have started to slow before 2008, but was masked by factors such as population growth and expanding globalisation.
- 2.38 Productivity growth has been slowing in a number of developed economies over the last decade. The reasons for this are a matter of debate, with no emerging consensus. While the Commission does not seek to explain the fundamental reasons why productivity growth has slowed, we do have to make a judgement on whether this slow growth is a temporary phenomenon driven by one-off factors or a new normal.
- 2.39 On the one hand, events leading up to and the fallout from the financial crisis, including a period of relative UK Government fiscal contraction, have had a significant impact on the economy. Even though the repercussions have been long lasting, they could ultimately be viewed as temporary effects that will work their way out of the system so that at some point, economic growth will return to historic norms, taken to be productivity growth of around two per cent.
- 2.40 On the other hand, slowing productivity growth may be part of a longer term and global phenomenon. Given this view, there is no such thing as a permanent or normal productivity growth rate and the trend can rise and fall in long waves. A growth rate of around 0.5 per cent per year is the 'new normal' for this period of history, and we cannot necessarily expect higher growth rates to reappear over the forecast horizon of five years.
- 2.41 The Commission's forecast is a judgement. Our judgement is based on balancing both of the above arguments and comparing the observed recent phenomena against longer term trends.
- 2.42 In addition to the overall weakening of productivity growth, there are a number of specific aspects of Scotland's economic performance which are important in the consideration of its future economic prospects. Analysis by the

Commission suggests the headline figures on economic growth mask a weaker underlying economic picture. There are a number of reasons for this:

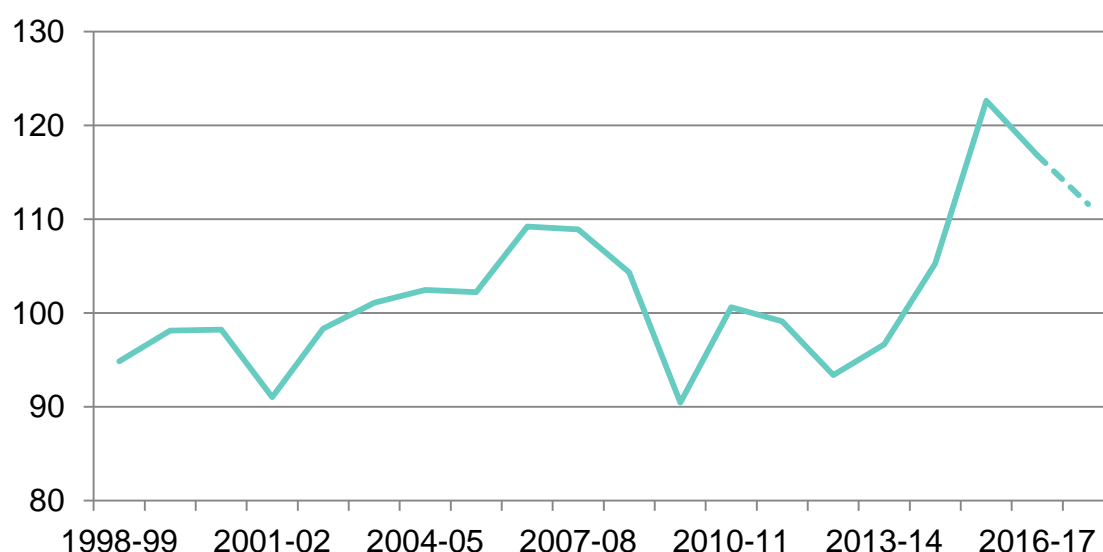
- Stronger GDP growth in 2015-16 was as a result in part of strong growth in the construction industry which is likely to be a one-off and temporary effect.
- Consumption has been the main driver of growth supported by a rapidly declining savings ratio which has now reached an historic low. Further declines in the savings ratio are not sustainable in the longer term.
- The growth that did occur in the last decade had support from population and labour market changes. Controlling for these changes suggests that the underlying performance is weaker than the headline figures. The outlook for the Scottish population and labour market suggests less support for GDP growth in the future.
- Buoyant UK Continental Shelf Oil & Gas activity in 2010 to 2014 supported onshore economic activity during this period, but this is unlikely to provide such support in future.
- UK monetary policy has been highly expansionary for this period

Each of these factors is explored in more depth below.

Recent GDP growth and the construction industry

2.43 The construction industry accounts for around six per cent of the Scottish economy. This is a small sector but, as Figure 2.2 shows, a volatile one.

Figure 2.2: Output in the construction industry, financial year levels, index 2014 = 100



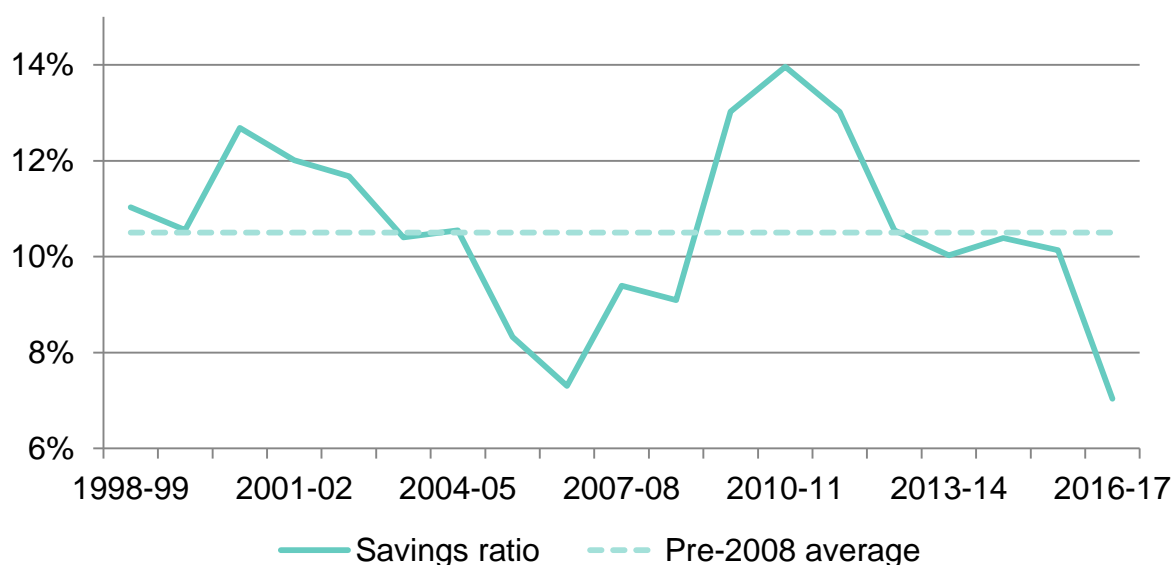
Source: Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)). Dashed line shows incomplete 2017-18 data

- 2.44** In 2014-15 and 2015-16, the construction industry in Scotland grew by 8.9 per cent and 16.5 per cent respectively. These are outliers compared to an average growth rate of 1.4 per cent. This supported headline GDP growth in these years.
- 2.45** Without the contribution from the construction industry, the Commission estimates that growth in Scottish GDP would have been 0.4 percentage points lower in 2014-15 and 1.1 percentage points lower in 2015-16. Similarly looking at the period from 2010-11, excluding the significant contribution of the construction industry, average GDP growth in Scotland would have been 1.0 per cent, compared to 1.2 per cent.
- 2.46** There are two possibilities why the construction data are so strong in 2015-16. Either, this is an issue with the data, and the construction industry did not really grow at such rates. Or, the construction industry genuinely went through a small boom in these years. Either way, the growth rates seen are unlikely to be repeated. Outturn data for 2017 Q2, shown as a dashed line in Figure 2.2, show the construction industry continuing to revert to previous trend levels.
- 2.47** When forecasting the economy, we must try to look through such one-off effects to understand the underlying trends. Assuming the construction industry does not repeat its performance of 2015-16 over the next five years, the underlying trend in the economy is expected to be weaker than the recent headline GDP figures suggest. We will continue to monitor construction industry data including any revisions to this historic pattern.

Contribution to growth of consumption and the declining savings ratio

- 2.48 Household consumption tends to be the main driver of growth. Since 2010, this has indeed been the case. While consumption accounts for around two thirds of the economy, it has accounted for a relatively greater three quarters of net growth in the economy over this period, offsetting declines in net trade.
- 2.49 This growth in consumption has not been driven by equivalent increases in household income, with real wage growth remaining low by historic standards. Households have increased their consumption since 2010, at least in part, by saving less. For some households, this is likely to mean net dissaving, either running down existing savings or taking on debt. The savings ratio in Scotland, the proportion on average households save from their income after consumption, has rapidly declined since 2010, as shown in Figure 2.3.

Figure 2.3: Household saving ratio (per cent)²⁶



Source: Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#))

- 2.50 The savings ratio has fallen from a peak of 14.7 per cent in 2010 Q4 to 6.4 per cent in 2017 Q2. This is similar to the historic low the savings ratio reached in 2006 of 6.1 per cent before the onset of the financial crisis.
- 2.51 Illustrative analysis by the Commission suggests that, had the savings ratio not declined over the period but instead remained at its historic average, over the period 2010-11 to 2016-17, average growth would have been 0.9 per cent per year rather than 1.2 per cent.

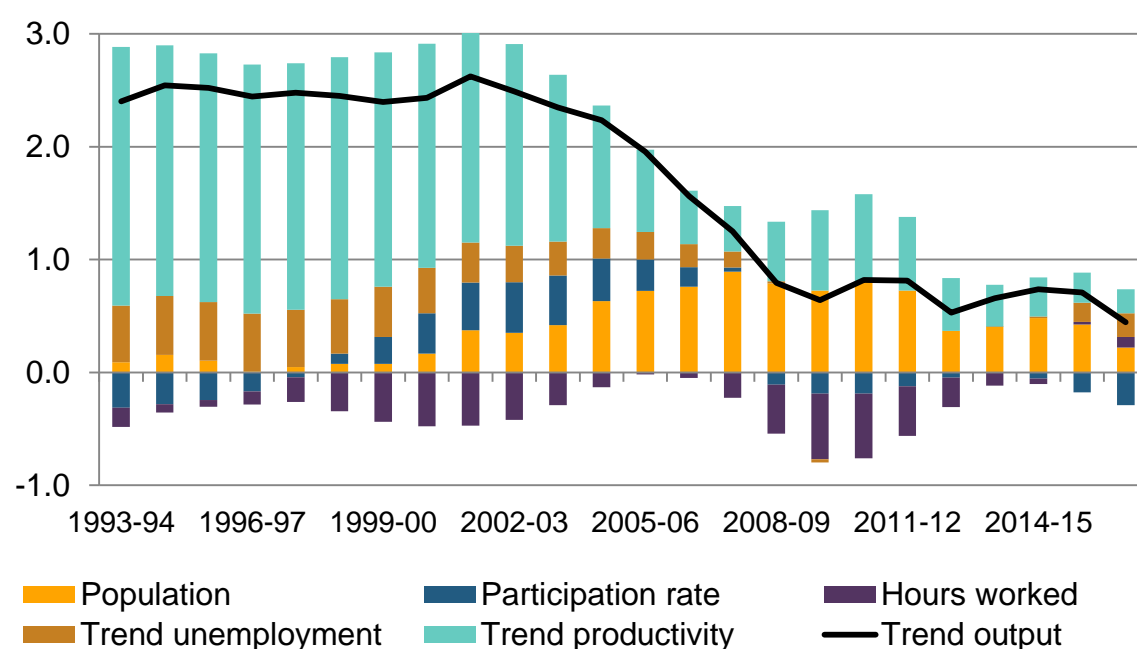
²⁶ Also includes NPISH – Non-profit institutions serving households.

2.52 Growth in consumption and GDP, supported by a falling savings ratio, is not sustainable indefinitely. The implication is that the growth achieved over the period 2010-11 to 2016-17 may not continue over the next five years. Even if the savings ratio were to remain flat at its historic low, growth in consumption would need to be driven by higher growth in real wages and household incomes.

Population, demographic and labour market support

2.53 To better understand underlying economic growth, GDP growth can be disaggregated into population, labour market and productivity factors. Figure 2.4 shows the Commission's analysis of how these different factors have contributed to Scottish GDP growth since 1993.

Figure 2.4: Contributions to trend Scottish GDP, financial year growth (%)



Source: Scottish Fiscal Commission

2.54 During the 1990s and early 2000s productivity was the main driver of Scottish trend GDP growth. Falling trend unemployment and increasing labour market participation also supported GDP growth. During this time, the Scottish population was not growing.

2.55 From around 2003 onwards, the Scottish population started growing and this supported headline GDP growth. From 2004-05 onwards, trend GDP growth started falling. During 2008-09 to 2016-17, growth in the Scottish population accounted for a significant proportion of GDP growth. If the Scottish

population had not been growing at a historically high rate at this time, the headline growth rate of trend GDP would have been even lower. During this time, growth in productivity was very low compared to historic values.

- 2.56 This again suggests the underlying performance of the economy has been weaker than headline figures suggest, with growth in the population and changes in the structure of the labour market supporting higher growth and masking a weak performance in productivity.
- 2.57 Analysis by the Commission suggests population and the labour market are unlikely to provide as much support to GDP growth over the next five years as they have done in recent years. Instead, the performance of the Scottish economy will be predominantly influenced by the performance of productivity.

UK Continental Shelf oil & gas activity

- 2.58 Activity in the UK Continental Shelf (UKCS) has an impact on the Scottish economy and we consider it as part of our forecasting process. The Commission is not required to produce forecasts of offshore GDP, we only consider the impact that the offshore industry will have on onshore GDP. Box 2.1 describes the technical definitions of the onshore economy and GDP.

Box 2.1: The relationship between our forecasts and UK Continental Shelf Oil & Gas Activity

This Box explains the important distinctions in our modelling between onshore Scotland and oil & gas extraction activities in the UK Continental Shelf (UKCS) region, and how different kinds of economic factors are affected.

The Commission is required to forecast onshore Scottish GDP. We also produce forecasts of important economic determinants such as employment and wages. These feed in to our forecasts of Scottish income tax liabilities, paid by individuals who are resident in Scotland for tax purposes. While our forecasts are primarily based on onshore Scotland, we do consider the impact of UKCS oil & gas extraction on onshore Scottish GDP.

GDP and capital expenditure

Onshore Scottish GDP is used as a shorthand term when referring to Scotland's GDP excluding the value of oil, gas and other hydrocarbons produced in the Scottish sector of the UK continental shelf as defined in the Scottish Fiscal Commission Act 2016. This is the same basis as the headline GDP figures

published by the Scottish Government.

Although the direct output of offshore extraction companies is not included in the forecasts, they do include activities of onshore-based sub-contractors, for example mining support services, transport services and engineering services, and the wider oil and gas supply chain in Scotland which supports the activity of operators in the UKCS.

Significant capital and operational expenditure takes place in the UKCS. This is not accounted for directly as part of the Scottish economy. However, activity in the UKCS, for example increased capital expenditure, can create additional demand in the onshore Scottish economy, and we capture the impact of this relationship.

Employment, earnings and income tax

When it comes to employment, and particularly when considering income tax liabilities, this is based on where an individual is resident. As an individual cannot be resident in the UKCS, residence-based employment in the UKCS is technically zero. Instead, for those individuals who work in the UKCS, their employment will be captured in the region where they are resident. Some individuals working in the UKCS will be resident in Scotland, while some will be resident in the rest of the UK or even overseas. Those individuals working in the UKCS but resident in Scotland are part of our aggregate labour market forecast, and therefore feed through to our forecasts of income tax

Oil production, profits and taxes on oil and gas extraction

Oil production is the main component of UKCS activity that is not included in our modelling. Production determines the level of economic output in the UKCS, but does not directly affect onshore Scottish GDP. Instead, as described above, we model those factors in the UKCS that create demand for onshore output, for example capital investment, employment and earnings. Similarly, the profits arising from UKCS production are not directly captured as part of onshore GDP, and will only affect the Scottish economy where those profits are remitted to and spent in Scotland.

The UK Exchequer receives all taxes on UKCS oil and gas extraction, and these values are forecast by the OBR.

2.59 The Commission's view on the UKCS and its impact on the Scottish onshore economy is summarised as:

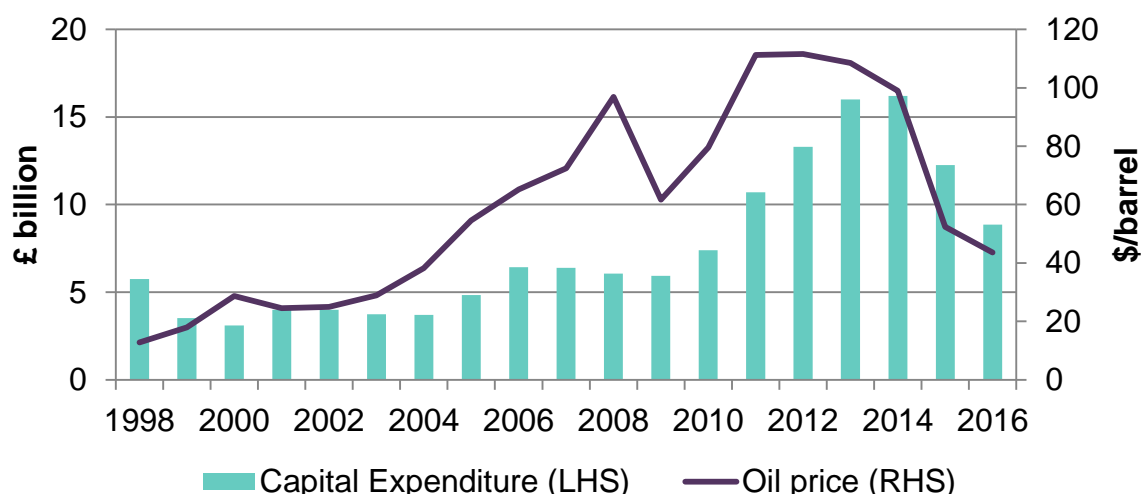
- During the period of high oil prices in 2010 to 2014, high levels of activity in the UKCS provided significant support to growth in the onshore Scottish economy. While growth in onshore GDP in some of these years was low, it would have been lower still without the support of UKCS activity.
- The fall in oil prices has led to a decline in UKCS activity, negatively affecting onshore GDP growth in 2015 and 2016.
- The UKCS has not yet fully adjusted to lower oil prices. While there are signs that some components including operational costs and employment are stabilising, other key factors such as capital expenditure continue to decline.
- In the medium term, activity in the UKCS is expected to level out as the industry continues to adjust. During this period it is unlikely to provide the same positive support to onshore economic activity as during 2010 to 2014. At best, the effect on growth will be neutral. On the other hand, should activity remain low and the declines in capital expenditure continue, the UKCS is likely to detract from onshore growth.

2.60 The outlook for capital and operational expenditure for the next few years are key for considering the likely impact of the UKCS on the onshore economy.

2.61 The onshore support activities to UKCS oil and gas extraction has provided support to the Scottish economy in recent years. Figure 2.5 shows that, from 2010 to 2014, capital expenditure in UKCS grew rapidly, nearly tripling from the level of capital expenditure in 2009. This rapid expansion will have created significant demand in the onshore economy during these years, supporting stronger growth in the onshore economy than would otherwise have been the case.

2.62 From 2014, oil prices fell from over \$100 per barrel to around \$50 per barrel. Despite production remaining resilient, profits and tax revenues fell significantly. As would be expected with the fall in oil prices and profits, capital expenditure has fallen sharply in 2015 and 2016, as can be seen in Figure 2.5.

Figure 2.5: UKCS capital expenditure and oil price



Source: Scottish Government Oil and Gas Production Statistics ([link](#)), Energy Information Administration ([link](#))

2.63 In line with other organisations such as the UK Oil & Gas Authority (OGA),²⁷ the Commission’s judgement is that UKCS capital expenditure growth will return to longer term averages in the coming years. This is based on three factors:

1. Capital expenditure was elevated far above historic norms in the period 2010 to 2014, driven by a number of factors including the high oil price and a large number of investors. As Figure 2.5 shows, there is still some way to go to realign with what might be considered more typical levels of capital expenditure in the UKCS.
2. There is a 3 to 5 year lag between capital expenditure being initially commissioned and it being executed and completed. Therefore, some capital expenditure executed during 2015 to 2016 was probably commissioned prior to the oil price starting to fall, propping up the overall level in these years. The impact of the 2014 fall in the oil price will affect the pipeline of capital expenditure projects for some years to come. The latest data on the capital expenditure pipeline suggest limited fresh investment, with only three new field approvals since 2016.²⁸ The Commission’s judgement is that capital expenditure has not yet fully adjusted to the lower oil price.
3. The UKCS competes in a global market for capital investment. The UKCS is a mature and expensive area. Emerging opportunities for extraction,

²⁷ The UK Oil & Gas Authority published a report in March 2017 showing a forecast of a continuing fall in UKCS capital expenditure, see Figure 1 in the OGA report: Oil & Gas Authority (2017) Lessons Learned from UKCS Oil and Gas Projects 2011-2016 ([link](#))

²⁸ Oil and Gas UK (2017) Economic Report 2017 ([link](#))

including unconventional extraction, may attract investment away from the UKCS.

- 2.64 Focussing on the five-year forecast horizon, the Commission expects new capital expenditure not to return to the elevated levels of the period 2010 to 2016 and be more in line with capital expenditure seen prior to 2010. Capital expenditure is closely linked with activity which directly affects demand for goods and services from the onshore economy. As low activity and limited new investment are expected to persist in the near future, the supply chain will continue to experience relatively low revenues and employment. This will limit its scope to support GDP growth as much as it did between 2010 and 2014.
- 2.65 Offsetting this, decommissioning activity is likely to increase towards the end of the forecasting horizon. Decommissioning expenditure was estimated at £1.2 billion in 2016 and is expected to rise above £2 billion in 2017 and 2018.²⁹ This will replace some of the onshore demand lost to lower capital expenditure, but is not sufficient to fully close the gap within our forecast horizon.
- 2.66 Operational expenditure, which is primarily labour costs, has fallen much faster than capital expenditure. The oil industry reported a 50 per cent decline in operational expenditure per barrel of oil produced between 2014 and 2015. This has been achieved in part through reducing wages, particularly for contractors, tightening rotas, an increase in production efficiencies and the depreciation of the pound against the dollar.
- 2.67 Operating costs are closely related to direct employment. The fast-paced cost cutting the industry went through in recent years has led to a fall in the demand for labour and wages with a notable impact on the economy around Aberdeen. The industry's drive to reduce operating costs and improve efficiency as soon as possible affected the supply chain with a significant number of companies unable to survive.
- 2.68 Volatility and uncertainty in global markets are likely to persist in the short to medium-term and this will constrain oil prices. However, oil prices have a more positive outlook having gradually increased in 2017 compared to 2016.
- 2.69 Overall, the outlook for operating expenditure looks more positive than for capital expenditure. Most companies have undertaken the necessary operational efficiency improvements such that further cost reduction is unlikely. Operational expenditure is expected to be stable in the coming years. This should in turn slowdown job losses.

²⁹ Oil & Gas UK (2017) Business Outlook 2017 ([link](#))

- 2.70 Despite the challenges experienced by the oil and gas industry, production in the UKCS has remained resilient, remaining largely stable since the initial decline in reaction to the price fall. The most recent data release shows that production grew by about one per cent in the first half of 2017 compared with the same period in 2016. Production has been sustained by increased efficiency that has improved the performance of existing assets. However, as discussed in Box 2.1, this does not directly affect our view of the impact of UKCS on the onshore Scottish economy.
- 2.71 In the medium term, activity in the UKCS is expected to rebalance around a lower level of employment and limited new investment with activity and revenues driven primarily by production efficiencies. The UKCS may offer some support to demand in the onshore economy over the next five years, but not at the same level seen during 2010 to 2014.
- 2.72 On balance, the Commission's judgement reflects a neutral impact of UKCS activity on Scotland, neither contributing to nor detracting significantly from growth over the next five years. This does mean that, all else equal, onshore GDP growth may be weaker than in the period 2010 to 2014.
- 2.73 Further falls in capital expenditure in the UKCS are seen as a downside risk to the forecast.

Expansionary monetary policy

- 2.74 With interest rates between 0.5 per cent and 0.25 per cent and the effects of quantitative easing, UK monetary policy has been set to a very expansionary position since 2010.
- 2.75 This will have provided support to the Scottish economy. With monetary policy close to the lower bound and limited headroom for monetary policy to become more expansionary in the coming years, monetary policy can only move in one direction. To the extent that monetary policy moves in a contractionary direction in the coming years, this will reduce support for growth in Scottish GDP.

Conclusion on economic trends

- 2.76 The Commission has looked in detail at growth in the Scottish economy over the last several years. The slowing of productivity growth has been a key factor. However, a number of other factors have contributed to growth being higher over this period than may otherwise have been the case. These factors

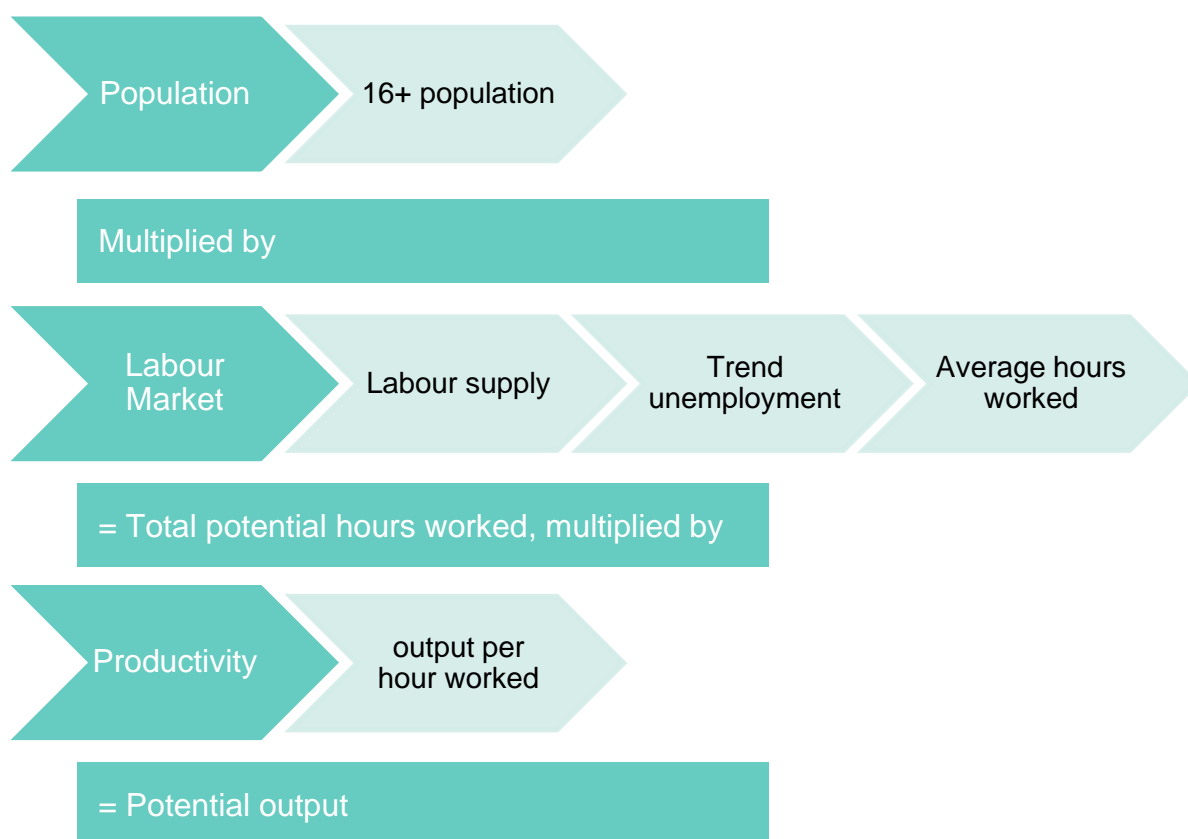
are not expected to continue to provide such support over the next five years. Controlling for these factors and stripping out their effect, underlying growth in the Scottish economy has recently been below previous historic norms.

- 2.77 In addition, the Scottish economy faces downside risks. This includes UK-EU exit, generally tightening fiscal policy from the UK Government, and the contractionary direction of monetary policy.
- 2.78 The underlying strength of the economy is captured by our estimates of productivity growth. As shown in Figure 2.4 above, slowing growth in productivity has been a feature of the Scottish economy since around 2004. Slowing growth in productivity is a feature of many developed economies and the causes of this are not well understood, with many possible reasons cited.
- 2.79 The Commission's forecast is based on the judgement that slow growth in productivity will continue in the near term before a gradual return towards longer-term historic norms. In order to have higher GDP growth, the Scottish economy would have to reverse recent trends and at present, we do not see evidence that this is likely to happen.

Forecasting potential output

- 2.80 Potential output describes the maximum amount of output the economy can sustainably produce. While the economy may vary above or below potential output from one year to the next, potential output acts as the anchor for our forecasts over the longer term.
- 2.81 To build a picture of potential output, the Commission separately forecasts population, the labour market and productivity. Combining these trend forecasts produces a forecast of potential output, as shown in Figure 2.6.

Figure 2.6: Schematic representation of forecast of potential output



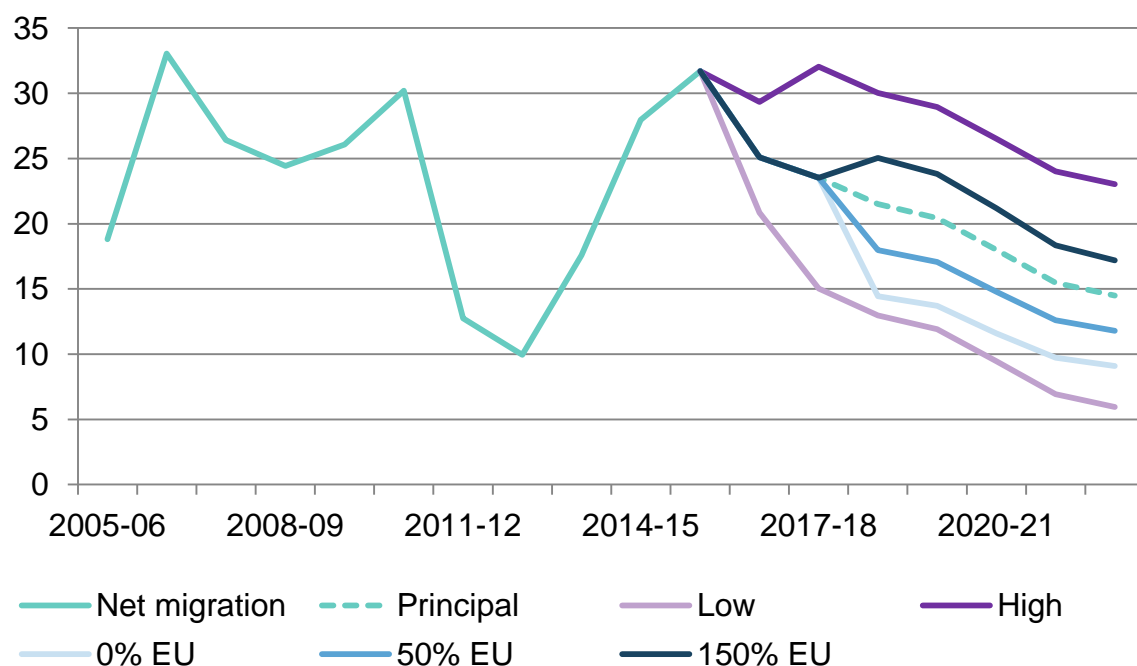
Source: Scottish Fiscal Commission

Population

- 2.82** The ONS produces population projections. These provide a detailed breakdown of population by age and gender. These are projections based on assuming recent trends continue, and do not capture broader judgements about possible changes in trends. The ONS produces a broad range of different projections based on fertility, mortality and migration, and we selected the variant for our forecasts that most closely matched our expectations for population growth.
- 2.83** One of the key uncertainties in population projections is migration. The UK Government sets migration policy which in turn affects Scotland. While the previous and current UK Government has had a target of reducing net migration to the UK, it has continued to remain above expectations. Similar to the UK, Scotland has experienced levels of net migration above expectations in recent years.

2.84 Figure 2.7 shows Scottish net migration in the most recent 2016-based population projections for Scotland compared to available outturn data. This shows the principal population projection, the high and low migration variants, and the three EU migration variants.

Figure 2.7: Scottish net migration historic data and projections with migration variants, thousands of individuals



Source: NRS (2017) mid-year population estimates (July 2017) ([link](#)), ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

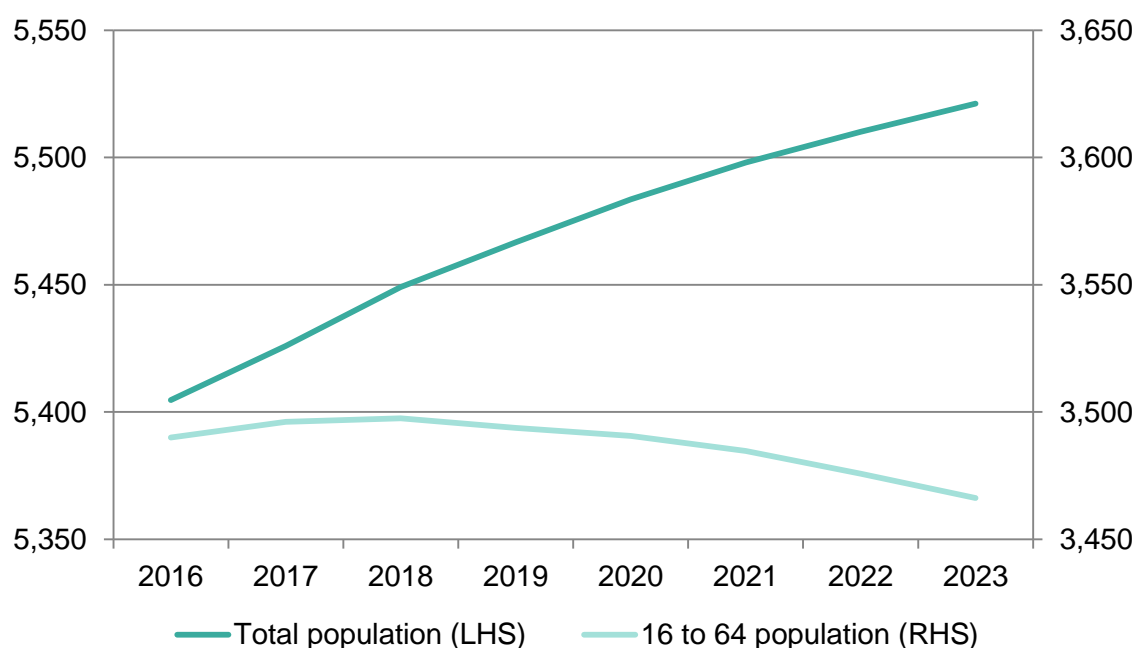
2.85 Outturn data show recent net migration increasing to a high level. However, given the potential impact of changes in the UK's relationship with the EU, the Commission's judgement is that a lower migration assumption is more appropriate. Therefore, the Commission uses the ONS 50 per cent EU migration variant projection. Further information on how this variant is constructed is available from the ONS.³⁰ The sensitivity of the forecast to this key judgement is illustrated at the end of this Chapter.

2.86 The Commission does not produce forecasts of the population, and chose the ONS population projection variant which is closest to being a central assumption. More timely UK migration data suggest that migration has reduced in the most recent periods. The Commission will continue to monitor all information available and revisit this assumption in future forecasts.

2.87 Figure 2.8 shows the Commission's population forecasts.

³⁰ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

Figure 2.8: Forecast Scottish total population and 16 to 64 year old population, thousands



Source: ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

2.88 Figure 2.8 shows total Scottish population and the 16 to 64 year old population, the part of the population with the highest labour market participation. As discussed above, the Scottish population experienced higher rates of growth in the 2000's and early 2010's. This growth rate is expected to be lower over the forecast horizon.

2.89 For the Scottish population as a whole, growth rates are expected to be lower but still positive. However, the Scottish population aged 16 to 64 is expected to start shrinking over the forecast horizon. This would also be the case in the principal projection.

Labour market

2.90 The total potential labour supply in Scotland is referred to as the participation level, also known as the labour force or economic activity level.

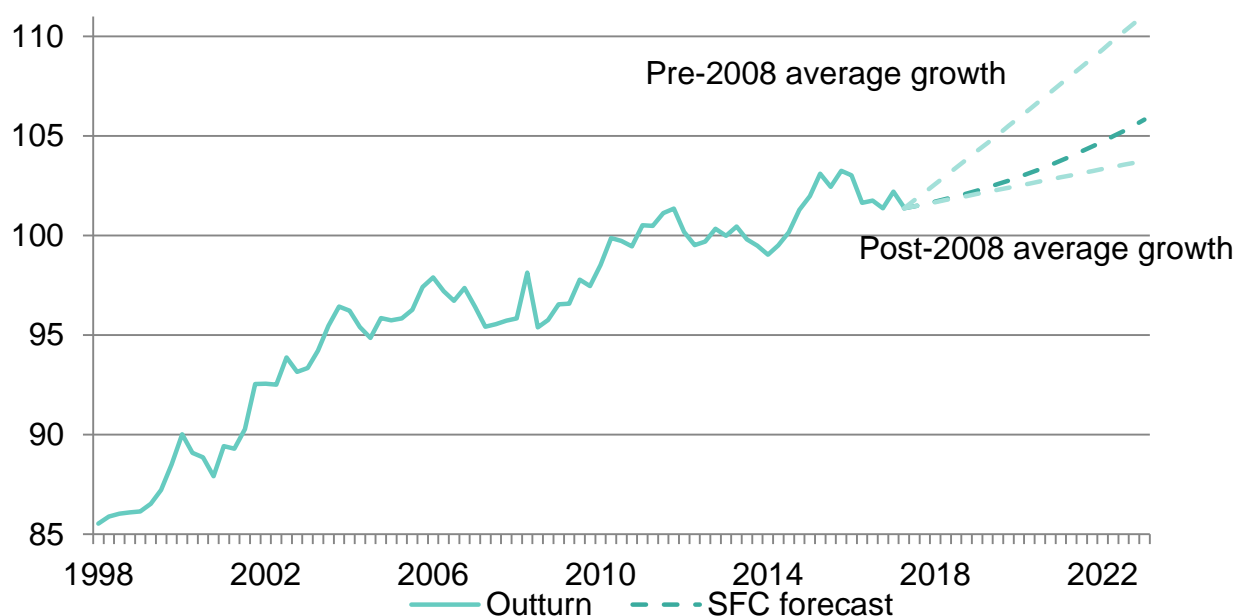
2.91 A shrinking 16 to 64 population in Scotland will act to reduce the Scottish labour supply. However, other factors will also affect the labour supply, including growth in the 65 plus population and their participation, Scotland's demographic make-up and trends in participation amongst different groups. The Commission's analysis of all these factors leads to a forecast of increasing total labour market participation.

- 2.92 The Commission judges the trend unemployment rate in Scotland to be lower than in the past at 4.5 per cent.
- 2.93 Historically, average hours worked in Scotland have been gradually declining. The Commission forecasts average hours worked based on recent trends in part-time and full-time work and how hours worked have changed in each group over time. Given recent trends, the Commission expects average hours worked in Scotland to be broadly flat.

Productivity

- 2.94 As discussed above, the growth rate of productivity appears to have been slowing since 2004, with the financial crisis exacerbating this trend. The Commission estimates that trend productivity in Scotland has grown at an average of 0.5 per cent per year since 2008, compared to an average growth rate of 1.6 per cent per year prior to 2008. The Commission's judgement on productivity is a balance between the more recent observations and the longer-term trend, as shown in Figure 2.9.
- 2.95 As discussed in the previous section, there are a number of reasons to believe that recent underlying GDP growth in Scotland is weaker than the headline figures suggest. These factors are reflected in the Commission's trend productivity forecasts.
- 2.96 The Commission judges that the changing relationship between the UK and the EU will weigh on productivity growth. An open and trading economy, with strong flows of foreign labour and investment, is generally believed to provide for higher growth in productivity – all else equal. Lower levels of trade and migration, and a lower level of economic openness more generally, adds to the judgement that productivity in Scotland will grow at a slower rate than may otherwise have been the case over the next five years.
- 2.97 The Commission's core judgement on productivity is that the growth rate will remain at low levels in the near future before gradually returning towards historic levels. This would have been the case even without the additional impact of the UK-EU exit. The likely impacts of UK-EU exit reinforce our expectation of low productivity growth over the next five years.
- 2.98 From growth of 0.5 per cent in 2018-19, trend productivity growth is assumed to reach 1.0 per cent per year by the end of the forecast horizon. This is still somewhat below the pre-2008 average of 1.6 per cent.

Figure 2.9: Historic productivity, low to high projections and forecast, constant prices (2014 = 100)



Source: Scottish Fiscal Commission

2.99 The OBR significantly revised down its productivity forecasts in November 2017. The OBR forecasts trend productivity growth in the UK to be 0.7 per cent in 2018, growing to 1.2 per cent in 2022. The Commission's forecasts are similar to the OBR's, but with slightly slower growth.

Forecast of potential output

2.100 Combining all these elements creates a forecast of potential output. The forecast is shown in Figure 2.10, extending Figure 2.4 to include the forecast period, and Table 2.6, which includes the contribution of each of the components.

Figure 2.10: Potential output and contribution of components, financial year per cent growth

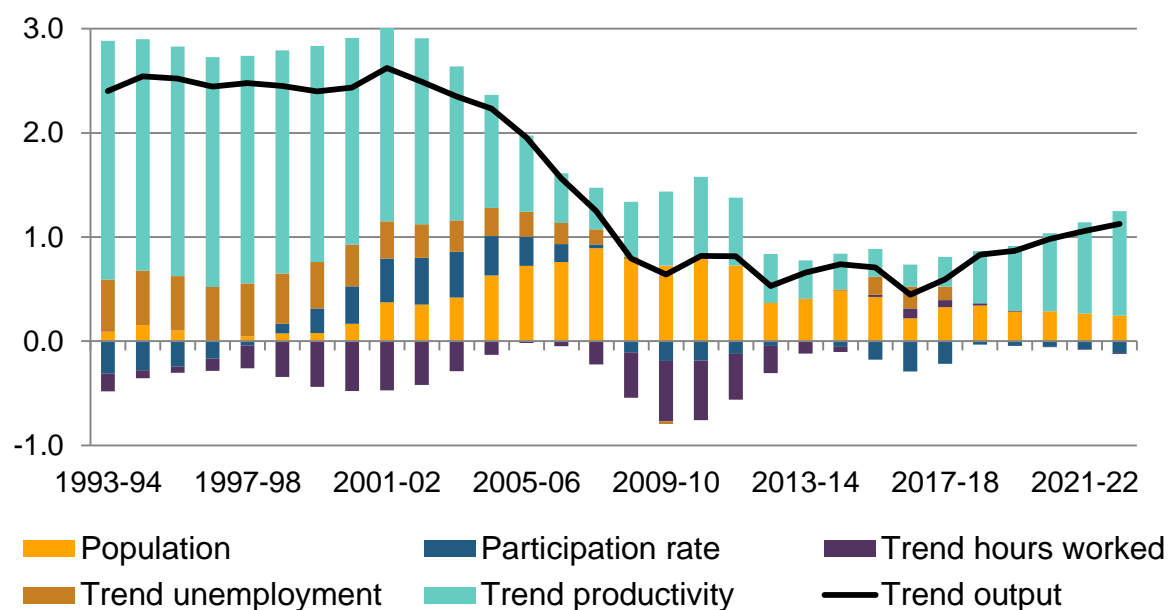


Table 2.6: Growth of potential output and contribution of components

	Potential output growth (%)	Component of potential output (%)				
		16+ population	16+ participation rate	Trend unemployment rate	Trend average hours worked	Trend productivity
2016-17	0.4	0.2	-0.3	0.2	0.1	0.2
2017-18	0.6	0.3	-0.2	0.1	0.1	0.3
2018-19	0.8	0.3	0.0	0.0	0.0	0.5
2019-20	0.9	0.3	0.0	0.0	0.0	0.6
2020-21	1.0	0.3	-0.1	0.0	0.0	0.7
2021-22	1.1	0.3	-0.1	0.0	0.0	0.9
2022-23	1.1	0.2	-0.1	0.0	0.0	1.0

Source: Scottish Fiscal Commission

Short-run forecasts

- 2.101** This section sets out the our analysis on what is happening in the Scottish economy today and our forecast for the coming quarters.
- 2.102** Recent data releases indicate a moderate start to 2017 for Scotland. Following a strong Q1 performance of 0.6 per cent, GDP growth in Q2 was weaker with an outturn of 0.1 per cent. The moderate growth in the first half of 2017 follows a weaker performance in 2016, with the economy shrinking by 0.2 per cent in 2016 Q4. Over the year from 2016 Q2 to 2017 Q2, the economy grew by 0.5 per cent, below historic levels.
- 2.103** The outturn figures for the first two quarters of 2017 points to the need to exercise caution when analysing the strength of the Scottish economy. Because of the size of the Scottish economy, one-off events in particular sectors can significantly influence short term performance. Our expectations for Scottish economic growth remain moderate, with positive but low growth forecast for the rest of 2017.
- 2.104** The Scottish labour market is continuing its run of robust performance. The employment rate reached an historic high of 75.8 per cent in May to July 2017. Compared to 2016, the employment rate in Scotland grew by 1.6 percentage points to 75.2 per cent in July-September 2017. The increase in the employment rate has mainly been driven by an increase in the participation rate, in part undoing recent falls in the participation rate and reflecting a return to previous trends. The unemployment rate remains at historic lows of around four per cent.
- 2.105** The participation rate is expected to continue to increase as it realigns itself with trend values. With the unemployment rate already at historic lows, the Commission's view is that the scope for further gains in employment are limited. The Commission's forecast is for steady growth in the employment level over the rest of 2017.
- 2.106** The headline CPI inflation rate in the UK has increased rapidly over the last year, increasing from an annual value of 0.6 per cent in August 2016 to 3.0 per cent in October 2017. This is primarily because of falls in the value of sterling resulting in higher prices of imported goods and services, rather than reflecting domestically generated price pressures.
- 2.107** This rapid increase in the price level has not been reflected in nominal wages. As a result, real wage growth in the UK and Scotland has slowed significantly. After struggling to achieve significant real wage growth following the 2008 recession, the UK and Scottish economies are again experiencing stagnant

real wages. This is likely to be a temporary effect as the sterling price stabilises and its impact washes out of the inflation data.

- 2.108 Because of the lack of domestically generated price pressures, the Commission expects inflation to begin to fall in the near future.
- 2.109 The combination of temporary higher inflation and very low unemployment is forecast to lend some support to nominal wage growth in late 2017-18 and in to 2018-19. Real wages are expected to be broadly flat over 2017 and only gradually return to modest growth rates.
- 2.110 While the fall in the value of sterling has increased inflation, it should also provide some support to net trade this year. Scotland has seen stronger growth in the value of exports to the rest of the world than imports from the rest of the world in 2016 and in to 2017. This will have been supported by the sterling depreciation and a strong performance in some sectors such as tourism. While most of Scotland's trade is with the rest of the UK, and net trade has been on average detracting from GDP growth since 2010, we expect net trade to make a small positive contribution to growth in 2017-18.
- 2.111 The unofficial Scottish economic indicators have shown resilience in economic activity in 2017. The Bank of Scotland headline Purchasing Managers Index (PMI) rose during Q3, and in July reached its highest score since 2014. The Scottish Chambers of Commerce (SCC) Quarterly Economic Indicator survey for Q3 reported that business optimism continued to improve, indicating businesses remain resilient in the face of both Brexit negotiations uncertainty and the fragile Scottish economy. All major sectors continued to show a positive net balance in sales revenues and profits, with the exception of retail and wholesale. The retail sales index for Scotland showed zero growth for retail sales volumes in Q3 while sales values grew by 0.4 per cent. Since 2016 Q3, the volume of retail sales in Scotland has increased by 0.6 per cent while the value of sales increased by 3.3 per cent. The Scottish Consumer Sentiment Indicator remained on a negative balance in Q3 of -3.0, implying a continued reported decline in sentiment. However, compared to Q2 the indicator rose by 0.5 points.
- 2.112 Table 2.7 presents the Commission's short run quarterly economic forecasts. Given the outturn data for the first half of 2017 and our short run forecasts, we forecast GDP growth to be 0.7 per cent in 2017-18.

Table 2.7: Quarter on quarter growth rates, outturn and forecast, (%)

Quarter	GDP	Employment	Nominal wages
2016 Q2	0.1	1.4	1.0
2016 Q3	0.1	-0.8	1.4
2016 Q4	-0.2	0.2	-1.5
2017 Q1	0.6	0.1	1.3
2017 Q2	0.1	1.3	0.7
2017 Q3	0.1	0.2	0.5
2017 Q4	0.2	0.2	0.5

Source: Scottish Fiscal Commission, Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)), ONS (2017) Labour Force Survey November 2017 ([link](#)), Note: Shaded cells are outturn

The medium term outlook and the output gap

2.113 This section presents further detail on forecasts of:

- The output gap today
- The labour market
- Wages, earnings and household income
- Growth in GDP by component of expenditure
- Pathway of the output gap over the forecast horizon

The current output gap

2.114 Potential output is the maximum amount of goods and services the economy can sustainably produce given sufficient demand. We estimate potential output directly by considering trends in the population, the labour market and productivity.

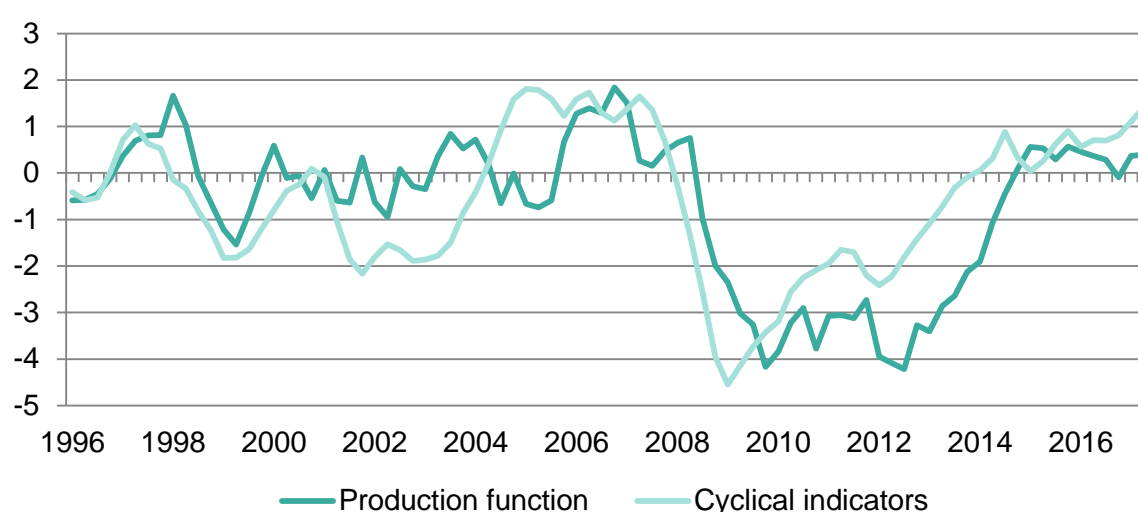
2.115 The difference between the Commission's estimates of potential and actual output determines the output gap in the economy. Our forecasts assume that the output gap will narrow over the forecast horizon, broadly returning actual GDP to its estimated long run trend.

2.116 The low unemployment rate, the low savings ratio, the temporary boom in the construction industry and slow productivity growth are all factors supporting a

judgement that the economy is operating somewhat above capacity. Our modelling of recent trends, which we call our production function approach, suggests a small but positive output gap in 2017-18 of 0.4 per cent.

2.117 We compare this implied output gap against market intelligence and the available surveys of spare capacity in the economy. At present, surveys of businesses in Scotland suggest they are operating above capacity. We aggregate the results of these surveys together as an alternative indicator of the output gap in Scotland. This is called the cyclical indicators approach. Both of our approaches to estimating the output gap in Scotland suggest a positive output gap today as shown in Figure 2.11.

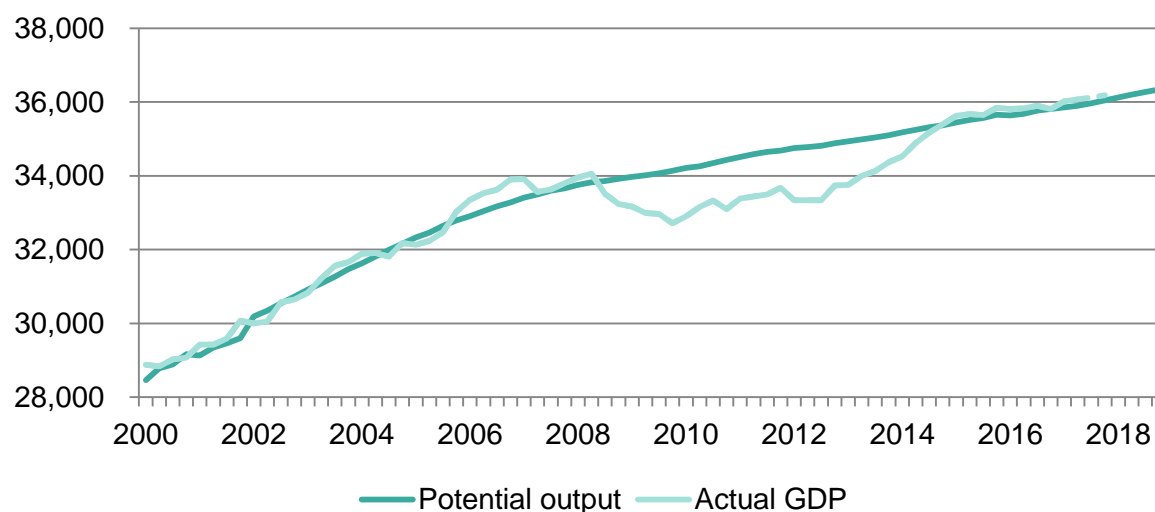
Figure 2.11: Scottish output gap comparison, % of trend GDP



Source: Scottish Fiscal Commission

2.118 While we place more weight on our production function approach to estimate the output gap, analysis of cyclical indicators gives us additional confidence in our judgement. Figure 2.12 shows actual output and our estimates of potential output.

Figure 2.12: Actual GDP and potential output, quarterly £ million 2014 constant prices



Source: Scottish Fiscal Commission, Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#))

2.119 Our judgement is that the economy, after a period below potential, is now operating close to capacity, with a small but positive output gap. That is, the economy is understood to currently be operating slightly above its potential. The scale of the output gap is significantly less than that seen just before the financial crisis.

2.120 Growth of potential output and the size of the output gap today are both critical judgements for the five year forecast. For the positive output gap to close over the forecast horizon, the growth rate of actual GDP must, on average, be below the growth rate of potential GDP, and this is what the Commission's forecasts reflect.

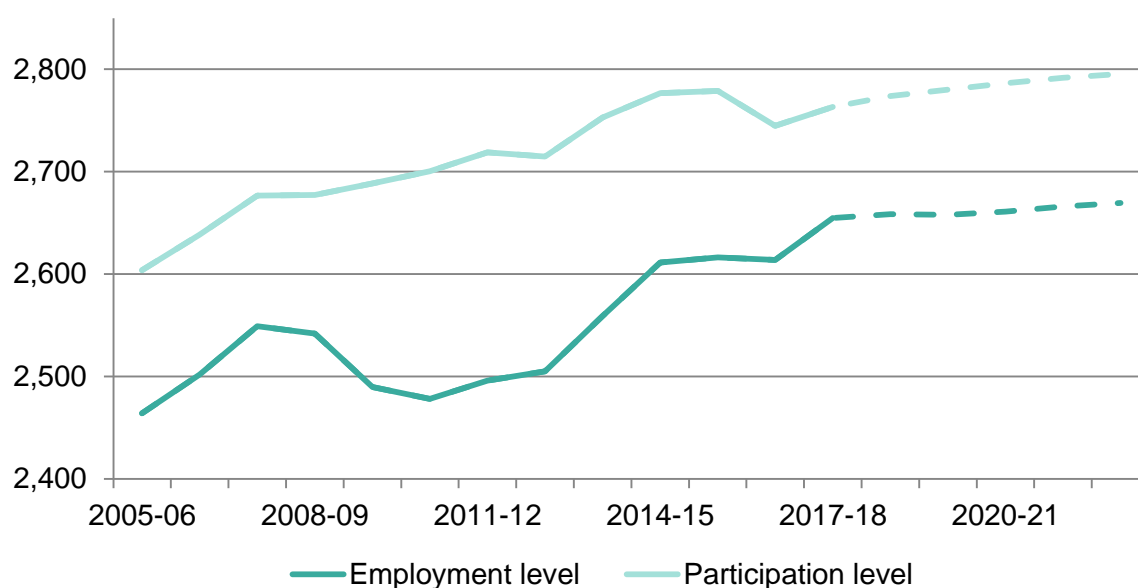
The labour market

2.121 The unemployment rate in Scotland is near an historic low of around 4.0 per cent, which is unlikely to be sustainable as businesses struggle to find labour. For example, the latest set of quarterly economic indicators published by the Scottish Chamber of Commerce highlighted recruitment difficulties in a number of sectors.

2.122 Given the recent very low levels of unemployment, the Commission has revised down its judgement on the long run trend rate of unemployment to 4.5 per cent.

2.123 We assume the unemployment rate will gradually return to this trend rate over the forecast horizon. Despite this slight increase in the unemployment rate from 4.0 per cent, because of the increasing size of the labour force, the employment level is expected to increase over the forecast horizon, as shown in Figure 2.13.

Figure 2.13: Employment and participation level, outturn and forecast, thousands of individuals



Source: Labour Force Survey ([link](#)), Scottish Fiscal Commission

2.124 Due to the current low level of unemployment and slower growth in the participation level, the employment level is expected to increase modestly compared to recent years.

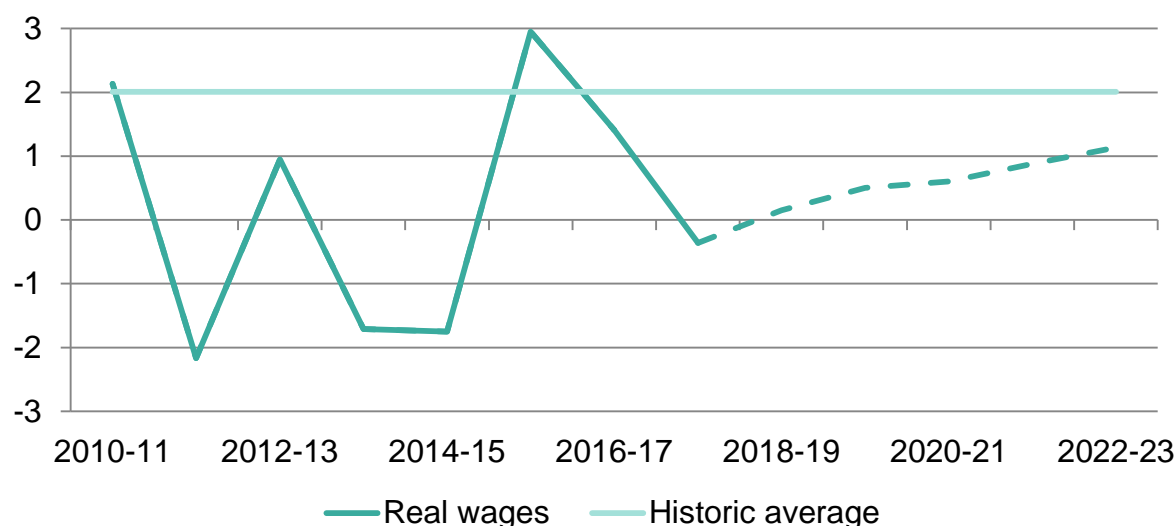
Wages, earnings and household incomes

2.125 Wages are the hourly pay of those in employment. Average earnings are the total average annual pay of those in employment and they are therefore also determined by average hours worked. Household incomes are affected not just by earnings, but also the proportion of individuals in employment, taxes, and by other sources of income such as income from wealth and from social security. Wages and employment are the main determinants of household income.

2.126 As shown in Figure 2.14, real wage growth has been low by historic standards since 2008. Real wage growth has been negative in some years and has averaged only 0.3 per cent per year since 2010. Despite a recovery in the growth rate to around 3.0 per cent in 2015-16, real wage growth fell in 2016-

17 and is now close to zero. This is primarily because of a sharp increase in the inflation rate without an equivalent increase in nominal wages, eroding the value of real wages.

Figure 2.14: Real wages, outturn and forecast, financial year growth rates (%)



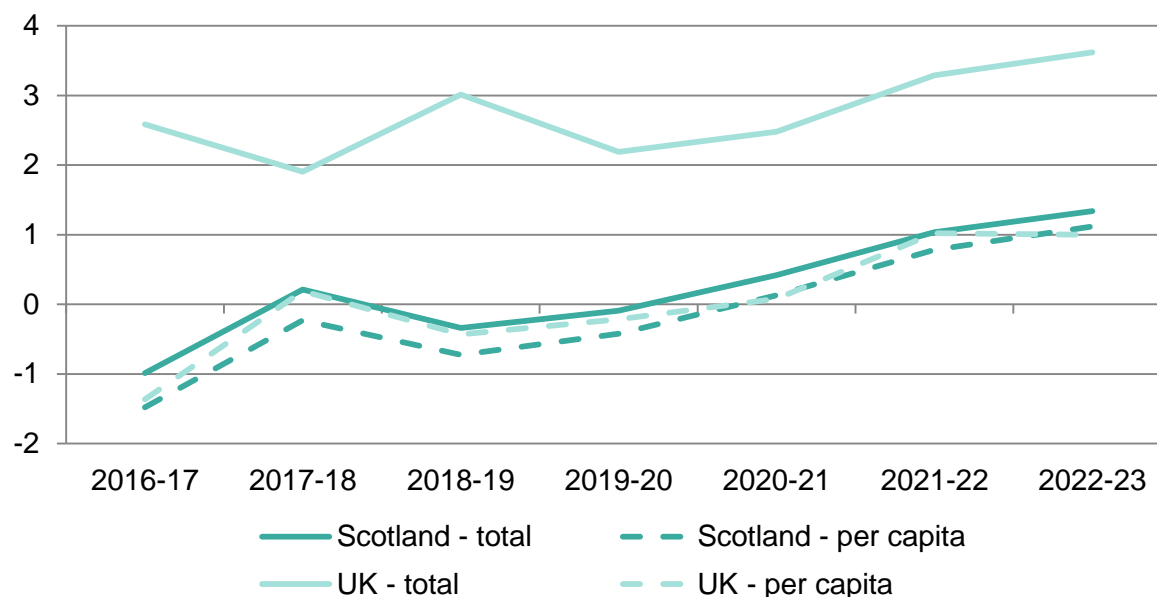
Source: Scottish Fiscal Commission

2.127 Real wage growth is expected to increase only gradually over the forecast, remaining well below historic averages. There is so far limited evidence that low unemployment rates are leading to higher growth in wages. In 2018-19, the growth rate of real wages is expected to become positive again as current elevated levels of inflation recede. Over the rest of the forecast, real wage growth increases broadly in line with the increasing growth of productivity from its current low level.

2.128 Average hours worked in Scotland has been falling for some time, though this trend is expected to flatten out over the forecast horizon. Changes in average hours worked are not expected to have a significant impact on total household earnings.

2.129 Real disposable household income (RDHI) takes into account income from employment, from other sources such as dividends and the impact of changes in direct household taxes and social security transfers including pensions. Limited growth in real wages and employment means limited growth in average RDHI, shown in Figure 2.15.

Figure 2.15: Real disposable household income, Scotland and OBR UK forecasts, total and per capita, financial year growth (%)



Source: Scottish Fiscal Commission, OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#)), Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#))

2.130 In line with the OBR, we forecast very limited growth in RDHI per capita driven by slow growth in real wages and employment. However, because of slower population growth in Scotland, growth in total RDHI is only slightly above growth in RDHI per capita.

2.131 Growth of RDHI is the main determinant of aggregate consumption.

GDP and the components of expenditure

2.132 The Commission forecasts consumption, investment, government spending and net trade separately. These sum to create a pathway for GDP.

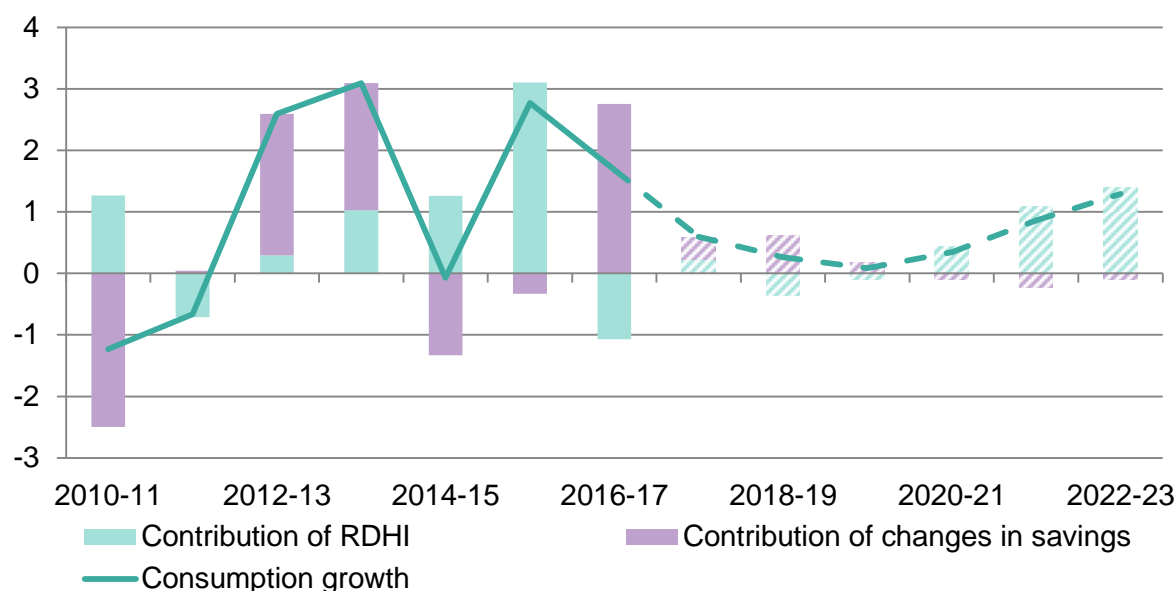
Consumption

2.133 The savings ratio has been falling since 2010, which has supported growth in consumption. As households have reduced their savings, or run down their financial assets or borrowed more, consumption has been supported, as shown in Figure 2.16 below. This cannot continue indefinitely. The rate of decline of the savings ratio is expected to slow in 2018-19 and remain flat for the rest of the forecast. This will mean that, relative to the period 2010-11 to 2016-17, consumption will not grow as much for a given increase in RDHI.

2.134 With growth in RDHI near zero and the savings ratio already close to an historic low, growth in consumption is forecast to be slow in 2018-19. As the

growth rate of RDHI picks up from 2020-21 onwards, consumption will start to recover. However, this growth will be tempered relative to the last five years because of the savings ratio, as shown in Figure 2.16.

Figure 2.16: Consumption by contribution of components: RDHI and dis-saving, outturn and forecast, financial year growth rate (%)



Source: Scottish Fiscal Commission

Investment (private gross capital formation)

2.135 Private sector gross capital formation (GCF), more loosely referred to as investment, is a historically volatile component of GDP. Investment historically is a small component of GDP growth, contributing on average 0.2 percentage points to annual GDP growth.

2.136 Investment has been weak in Scotland in recent years, largely falling since 2015. This short term trend is not expected to persist. The level of investment is expected to level out over the next two years, with a small bounce-back effect in levels after recent sharp falls. This leads to investment contributing 0.1 percentage points to GDP growth in 2018-19 and 2019-20.

2.137 For the five-year forecast horizon, on-going economic uncertainty, driven by weakness in the UKCS and UK-EU exit, is likely to dampen investment growth. Foreign business investment in Scotland is also likely to be limited. This will limit investment growth in Scotland in the later years of the forecast.

Government

2.138 The public sector, including consumption and investment spending, accounts for over a quarter of the economy. Government spending is driven less by the economic cycle, and more by UK Government and Scottish Government policy decisions. The Commission models UK and Scottish Government spending plans to estimate the impact on GDP. The impact of changes in direct household taxes and social security policy is captured through its impact on RDHI, as discussed in the previous section.

2.139 For UK Government and local authority spending in Scotland, the Commission utilises OBR forecasts from November 2017.

2.140 For Scottish Government spending, the Commission asked the Scottish Government for its spending plans. The Scottish Government provided a baseline set of spending projections for 2017-18 in October 2017. This included the Scottish Government's total budget from HM Treasury for future years. After the UK Autumn Budget, an update to the total budget figure was provided, but without updated spending plans. These spending projections do not include the impact of any changes to policy or borrowing plans announced at Draft Budget 2018-19. The policies announced at Draft Budget 2018-19 are not expected to have a significant impact on the economy over the five-year forecast period. For a discussion on the impact on the economy of changes in Scottish Government policy, see the section on second round effects.

2.141 The UK Autumn Budget and November 2017 OBR forecasts included a moderate fiscal expansion in the UK in 2018 and 2019 relative to previous UK Government fiscal plans, which will provide a higher level of support to GDP growth in these years. The impact feeds through to the Commission's forecasts. Because of the otherwise low level of GDP growth in these years, growth in the public sector has a relatively large impact in Scotland. For example, the public sector is expected to account for 0.7 percentage points of a total 0.9 percentage points of GDP growth in 2019-20. From 2020 onwards, this period of fiscal expansion comes to an end, and the support for GDP growth from the public sector diminishes to 0.3 percentage points in 2020-21. At the same time, private consumption begins to play more of a role in driving GDP growth.

Net trade

2.142 Historically, net trade has had a net negative impact on Scottish GDP growth, with growth in imports exceeding growth in exports. Net trade is made up of

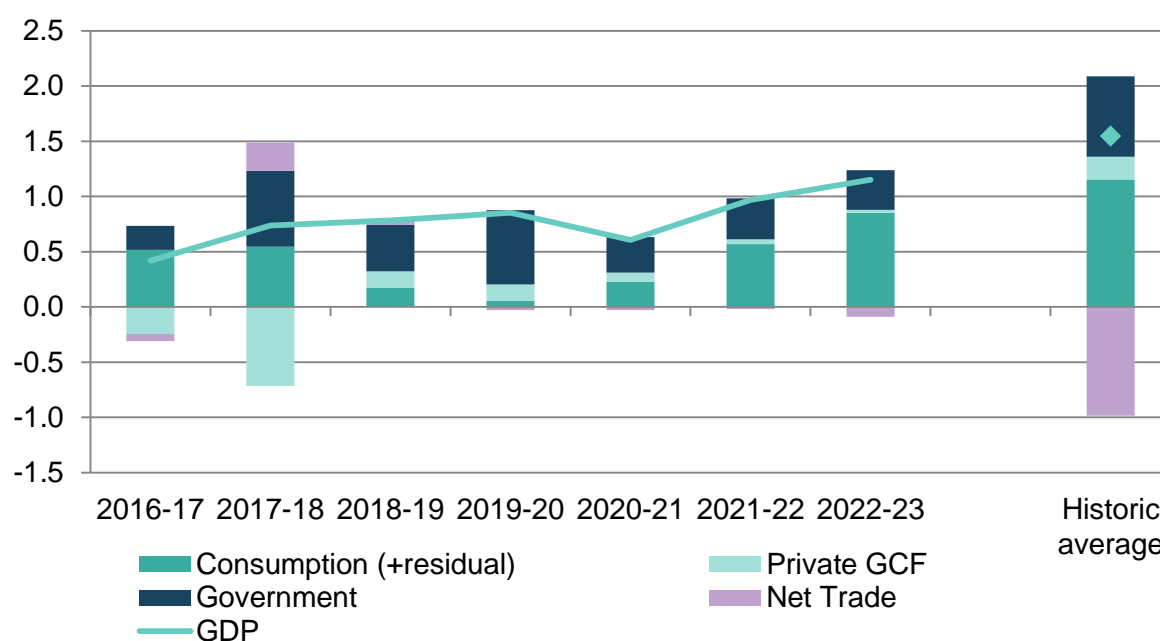
both trade with the rest of the UK as well as international trade. Trade with the rest of the UK is by far the larger component of Scottish trade. These two components are dealt with in turn.

- 2.143 The changing UK-EU relationship is likely to have an impact on Scottish international trade. The Commission uses the OBR's forecasts of UK trade, reflecting the OBR's Brexit assumptions, as a starting point for modelling Scottish international trade. Changing trade agreements, possibly leading to the UK and Scotland being more closed to trade, will have a negative impact on both gross exports and gross imports, reducing the total volume of trade, but with an ambiguous impact on net trade. In addition, an on-going lower Sterling level is likely to support exports and limit import growth, while weakness in household spending power will limit import growth. In aggregate, Scotland's net international trade is expected to fall slightly in 2017 and 2018 before flattening at this lower level for the next 5 years, neither contributing to or detracting from GDP growth from 2019 onwards.
- 2.144 Scotland has long had a negative trade balance with the rest of the UK and this gap has been widening rapidly in recent years, with a negative effect on growth in GDP. Households in Scotland are expected to have slower growth in incomes than their counterparts in the rest of the UK over the next five years. The likely effect will be to slow the growth of the negative trade balance with the rest of the UK. We forecast net trade with the rest of the UK to flatten out over the next five years, subtracting less than -0.1 percentage points from GDP growth in each year of the forecast.
- 2.145 Overall, Scottish net trade is expected to play a minor role in GDP over the forecast.

GDP

- 2.146 Figure 2.17 shows the contribution of each of these components to growth in GDP.

Figure 2.17: GDP and contributions by component, financial year growth (%)

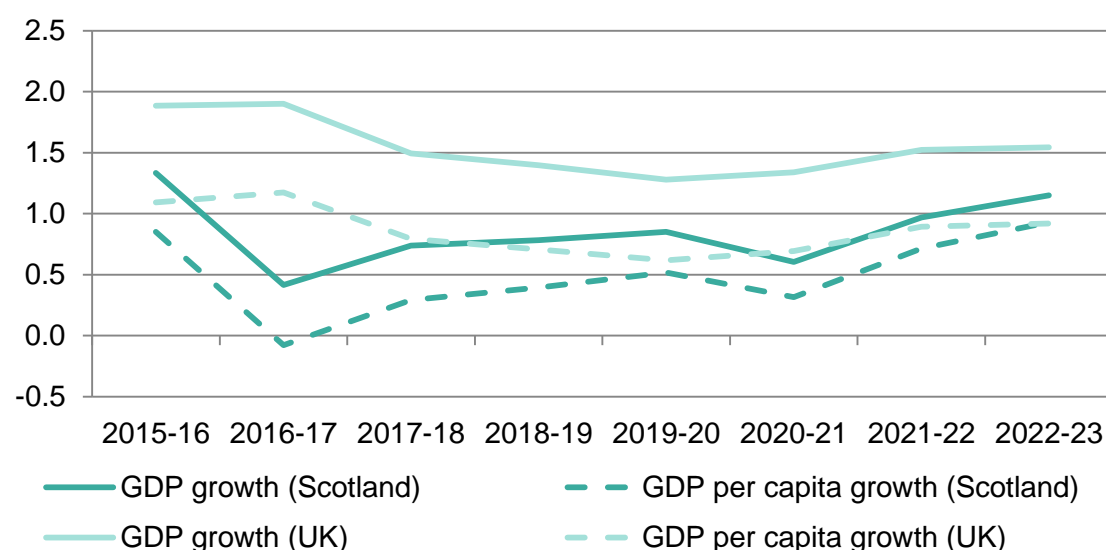


Source: Scottish Fiscal Commission

Note: Historic average is based on growth from 1998 to 2016

2.147 Compared to the OBR's forecasts for the UK, we forecast slower GDP growth for Scotland. As shown in Figure 2.18, this is in part because of slower population growth. Comparing growth in GDP per capita, we still forecast slower growth in Scotland than in the UK, though the size of the growth gap is significantly reduced.

Figure 2.18: Forecast growth in GDP and GDP per capita, Scotland as forecast by the SFC and UK as forecast by the OBR

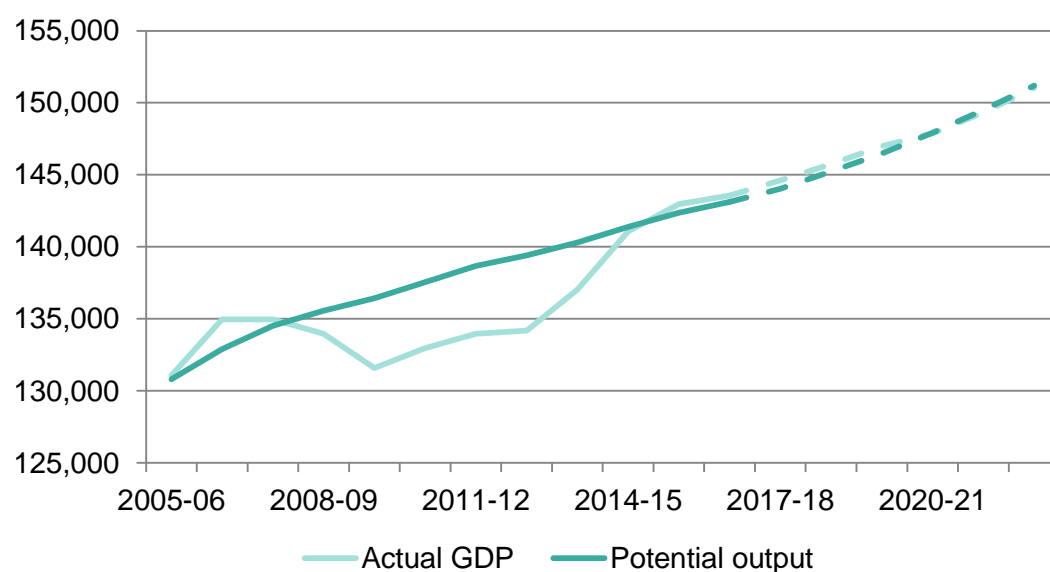


Source: Scottish Fiscal Commission, OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#)), Scottish Government (2017) Quarterly National Accounts Scotland Quarter 2 2017 ([link](#)),

Pathway of the output gap over the forecast horizon

2.148 The Commission estimates that actual GDP is currently broadly in line with its trend, with a positive but small output gap. Based on the analysis described above the growth rate of GDP is expected to be broadly in line with potential output. The output gap is forecast to gradually close over the forecast horizon.

Figure 2.19: Potential output and actual GDP, outturn and forecast, financial year, £ million, 2014 constant prices



Source: Scottish Fiscal Commission

Second round effects

- 2.149 Second round effects are changes in Scottish or UK Government policy that are judged to be of sufficient magnitude to affect the economy forecasts. Second round effects primarily capture any feedback from a change in policy on the economic determinants underlying the tax forecasts.
- 2.150 The impact of fiscal policies on the macroeconomy are hard to judge, often have long time-scales involved for any impact to be fully realised and will only have a secondary indirect impact on tax revenues. Therefore, the Commission will only include such effects where it judges them to have a significant impact on tax revenues.
- 2.151 The Scottish Government has announced a number of fiscal policy measures at Draft Budget 2018-19. These include changes to income tax, NDR, LBTT, and public sector pay policy.
- 2.152 Apart from the change to public sector pay policy, the Commission's judgement is that these policies are not of a large enough magnitude to have a significant aggregate impact on the Scottish economy, in particular with respect to our forecasts of earnings and employment. While they may have some impact on household consumption and business investment through their impact on taxes, this will be offset in part by changes to Scottish Government expenditure.
- 2.153 On the announced higher pay awards for the public sector, the Commission recognises that this could have some impact on the economy. However, the Commission received details of the policy towards the end of the economy forecasting process. As the announced policy is not expected to have a large impact on the outlook for the economy, and given the limited time with which to model the effects, the Commission took the decision not to factor the new public sector pay policy in to its economy forecasts at this stage. This policy is recognised as a minor upside risk to the forecast.
- 2.154 While the impact of changes to public sector pay has not been captured as part of the economy forecasts, we did model the impact on income tax revenues directly. Further detail is provided in Chapter 3.

Forecast sensitivities

- 2.155 The Commission is required to present a single set of forecasts for the economy, but in reality these represent a central point within a broad range of possible outcomes. The forecasts are primarily based on assuming recent underlying trends continue, with adjustments where evidence or judgement dictates. It is likely that in some instances the underlying trends the Commission has identified will change in unexpected ways in the coming years and the outcome for the economy will be different.
- 2.156 The Commission had to make a number of judgements about the likely future pathways of the economy. To capture uncertainty and illustrate the impact of these judgements, the Commission runs illustrative sensitivity analysis around its key judgements. This section presents the impact of variants of four key judgements in the forecast: migration, trend unemployment, average hours and productivity.
- 2.157 The Commission uses the 50 per cent EU migration population variant as its population forecast. The impact of higher migration is illustrated using the ONS' principal projection and similarly the impact of lower migration is illustrated using their low migration variant.
- 2.158 Trend unemployment is another uncertainty in the forecast and has a significant impact on the long run employment level. While the Commission judges that the trend unemployment rate has fallen recently, different variants are presented. These are for a trend unemployment rate of 4.0 per cent in a low scenario to 5.0 per cent in a high scenario.
- 2.159 Average hours worked are expected to stay flat over the forecast. The high average hours scenario assumes convergence of Scottish average hours with UK average hours over the forecast horizon. This represents an increase of 0.6 hours worked to 32.2 weekly hours by 2022-23. The Commission considers a symmetric fall of 0.6 hours by the end of the forecast horizon for the low hours scenario, which is approximately the fall in average over the historic period up to the financial crisis.
- 2.160 In the forecast, the growth rate of productivity is assumed to gradually increase from its current growth rate of around 0.5 per cent per year to reach growth of 1.0 per cent per year by 2022-23. In the low productivity variant presented here, the growth rate of productivity is assumed to remain at its current level of 0.5 per cent per year for the whole forecast. In the high productivity growth variant, the growth rate of productivity is assumed to be

close to 2.0 per cent per year in every year of the forecast, in line with growth rates seen prior to 2004.

2.161 The impact of these variants on GDP, employment, and average earnings are shown in Table 2.8 and Figures 2.20 to 2.22. The impact on income tax revenues of these variants is shown in Chapter 3.

Table 2.8: Economic forecast variants, average growth rates of GDP, employment and average earnings from 2017-18 to 2022-23 (%)

	Forecast		Low variant	High variant
GDP	0.8	Migration	0.7	0.9
		Unemployment	0.8	0.9
		Average hours	0.5	1.2
		Productivity	0.4	2.0
Employment	0.4	Migration	0.2	0.4
		Unemployment	0.3	0.4
		Average hours	0.4	0.4
		Productivity	0.4	0.4
Average earnings	2.5	Migration	2.5	2.5
		Unemployment	2.5	2.5
		Average hours	2.2	2.8
		Productivity	2.0	3.7

Source: Scottish Fiscal Commission

Figure 2.20: Economy forecast variants, average deviation from central forecast of annual GDP growth from 2017-18 to 2022-23, percentage points



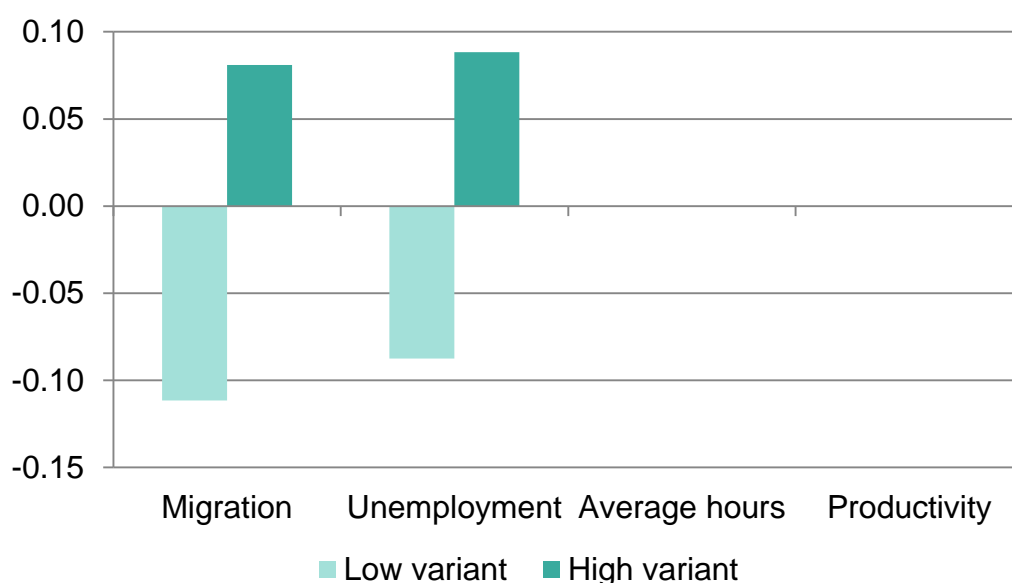
Source: Scottish Fiscal Commission

2.162 The central forecast is for GDP to grow at an average rate of 0.8 per cent per year from 2017-18 to 2022-23.

2.163 The migration and unemployment variants have a limited impact on GDP growth. The high and low average hours worked variants have a larger impact on GDP growth, up to an annual average of 0.3 percentage points over the forecast horizon.

2.164 The varying productivity assumptions have by far the greatest impact on the GDP growth rate. The Scottish economy would grow by an annual average of 1.1 percentage points more under the high productivity scenario, while it would grow by about 0.5 percentage points less under the low productivity scenario.

Figure 2.21: Economy forecast variants, deviation from central forecast of average employment growth from 2017-18 to 2022-23, (%)



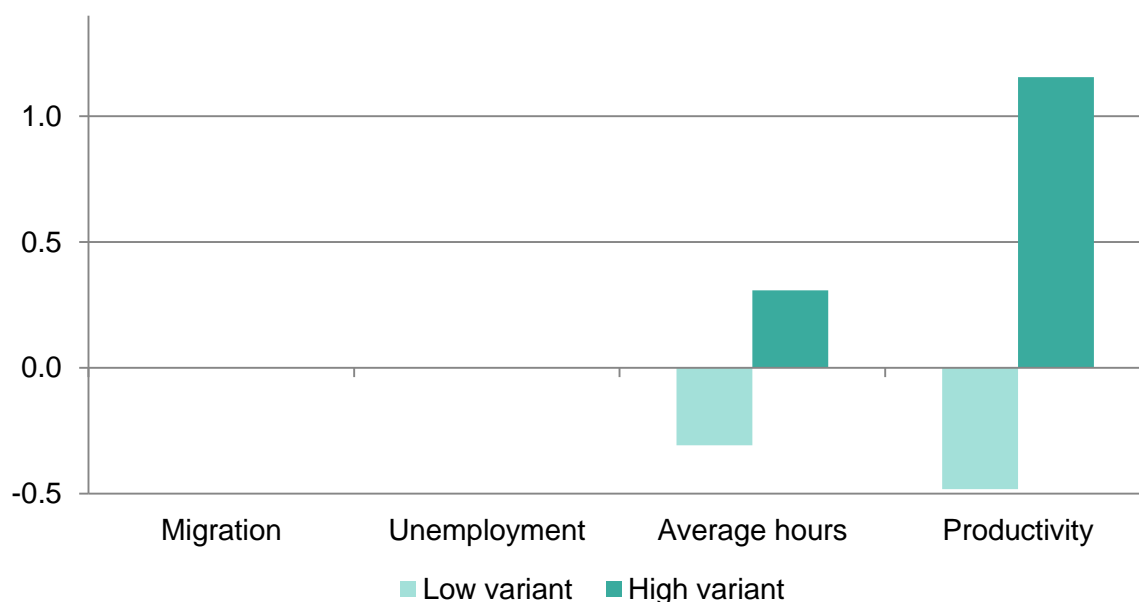
Source: Scottish Fiscal Commission

2.165 The central forecast for average annual growth in employment is 0.4 per cent. The employment level growth is affected by our migration and unemployment variants, with productivity and average hours having no direct impact in our model.³¹

³¹ This is unrealistic as a higher level of productivity is likely to increase wages and draw more individuals into the labour market. Such secondary effects are not captured in these simple sensitivity scenarios; the variants only illustrate the direct impacts on trend growth of the variants. Such considerations do not alter the broad message of the forecast sensitivities.

2.166 The impact of migration and unemployment variants on employment is the same as the impact on GDP growth. The impact of migration and unemployment on GDP comes directly from their impact on employment level growth.

Figure 2.22: Economic forecast variants, average deviation from central forecast of average nominal earnings growth from 2017-18 to 2022-23, (%)



Source: Scottish Fiscal Commission

2.167 The central forecast for average annual growth in nominal earnings is 2.5 per cent over the forecast horizon.

2.168 Contrary to employment level growth, productivity and average hours variants have a significant impact on average nominal earnings growth. The migration and unemployment variants have no direct impact on the growth rate of average nominal earnings.

2.169 The impact of average hours and productivity variants on average nominal earnings is similar to their impact on GDP growth.

Comparison to previous forecasts

2.170 This is the first set of economy forecasts published by the Commission. A comparison to previous economy forecasts published by the Scottish Government is provided in this section.³² Table 2.9 compares key variables

³² Scottish Government (2016) Devolved Taxes – Forecasting Methodology ([link](#)) see pages 12 - 23

from previous Scottish Government Draft Budget 2017-18 forecasts and the Commission's latest forecasts.

Table 2.9: Comparison of SFC Dec 2017 economy forecasts with Scottish Government Dec 16 economy forecasts

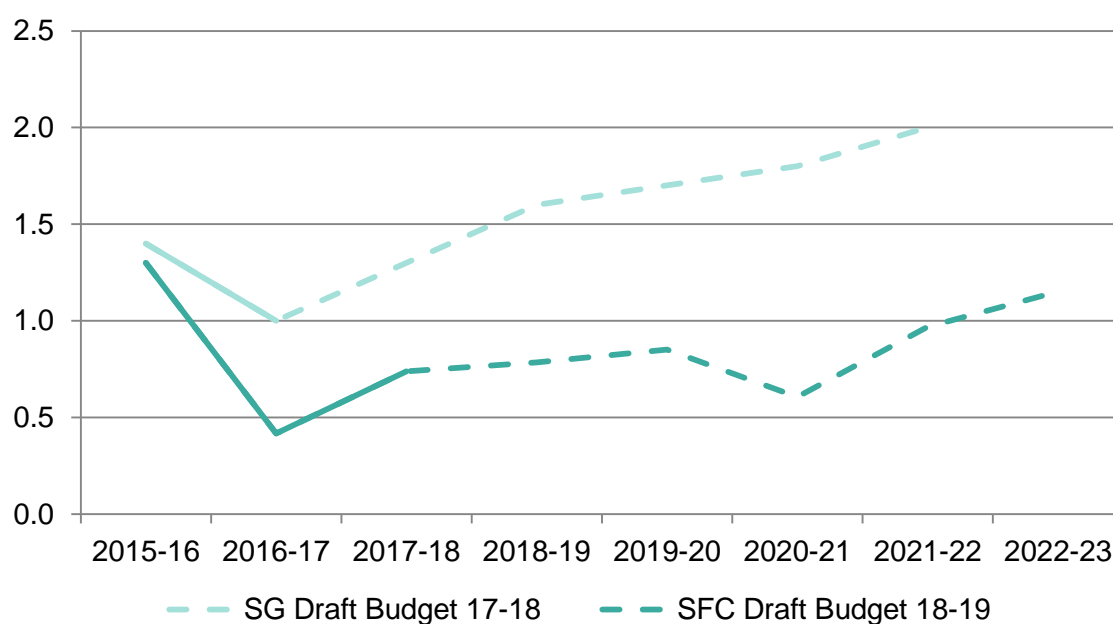
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
GDP	SG Dec 16	1	1.3	1.6	1.7	1.8	2	
	SFC Dec 17	0.4	0.7	0.8	0.9	0.6	1.0	1.2
Employment (‘000s)	SG Dec 16	2,618	2,626	2,632	2,639	2,640	2,655	
	SFC Dec 17	2,614	2,655	2,658	2,658	2,661	2,666	2,670
Unemployment	SG Dec 16	4.9	5.1	5.3	5.4	5.6	5.4	
	SFC Dec 17	4.8	3.9	4.2	4.4	4.5	4.5	4.5
Nominal wages	SG Dec 16	2.3	2.2	2.9	3.6	4.0	4.1	
	SFC Dec 17	2.9	2.0	2.3	2.4	2.6	2.9	3.2
Inflation	SG Dec 16	1.5	2.4	2.4	2.1	2.0	2.0	
	SFC Dec 17	1.4	2.4	2.1	1.9	2.0	2.0	2.0
Real wages	SG Dec 16	0.8	-0.1	0.5	1.5	2.0	2.0	
	SFC Dec 17	1.4	-0.4	0.2	0.5	0.6	0.9	1.2
Hours	SG Dec 16	0.0	0.1	0.1	0.0	0.0	0.0	
	SFC Dec 17	0.2	-0.2	0.0	0.0	0.0	0.0	0.0
Average annual earnings	SG Dec 16	2.3	2.3	2.9	3.6	4.1	4.1	
	SFC Dec 17	3.1	1.8	2.3	2.4	2.6	2.9	3.2

Source: Scottish Fiscal Commission and Scottish Government (2016) Devolved Taxes – Forecasting
Methodology ([link](#))

2.171 The grey shaded cells in Table 2.9 show outturn data. Outturn data are shown as was available at the time each forecast was made. These values are subject to revision.

2.172 Figure 2.23 compares GDP growth rates from the two forecasts.

Figure 2.23: Forecast comparison, GDP financial year growth rate (%)



Source: Scottish Fiscal Commission and Scottish Government (2016) Devolved Taxes – Forecasting Methodology ([link](#))

2.173 The forecasts by the Commission show a lower and flatter profile for GDP growth than in the previous forecasts. This lower profile is because of the Commission’s judgment that the outlook for annual trend productivity growth is significantly lower than the Scottish Government judged it to be, as shown in Table 2.10.

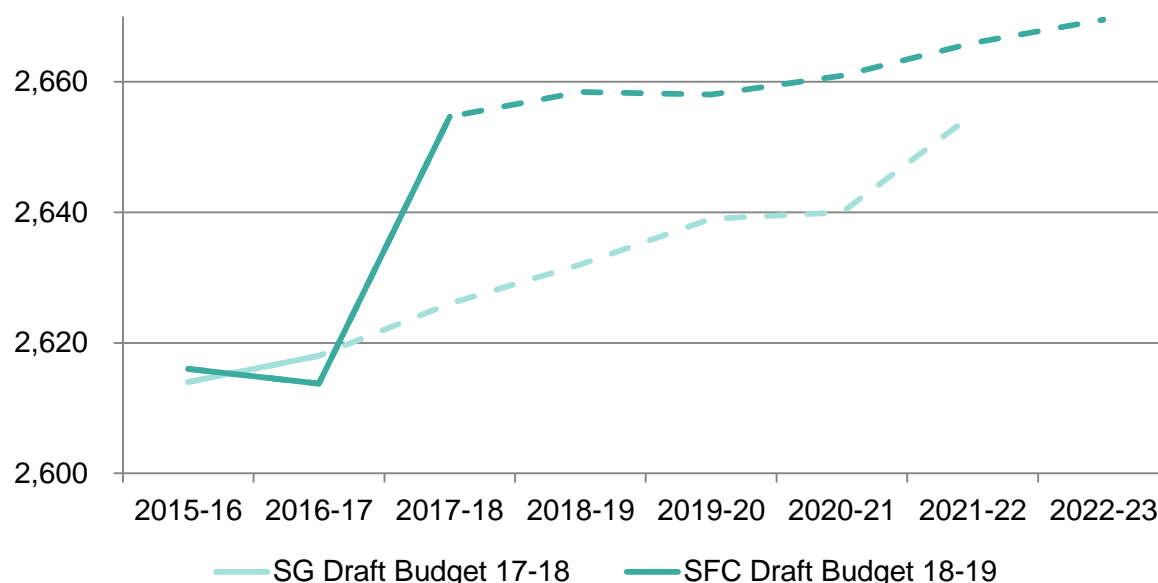
Table 2.10: Annual growth rate of trend productivity (%)

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG December 2016 ¹	1.3	1.4	1.5	1.6	1.8	1.8	
SFC December 2017	0.2	0.3	0.5	0.6	0.7	0.9	1.0

Source: Scottish Fiscal Commission and Scottish Government (2016) Devolved Taxes – Forecasting Methodology ([link](#))

2.174 Growth in employment and average earnings are the most important economic determinants in forecasting income tax. Figure 2.24 shows comparisons of employment forecasts.

Figure 2.24: Forecast comparison, employment level financial years (thousands)

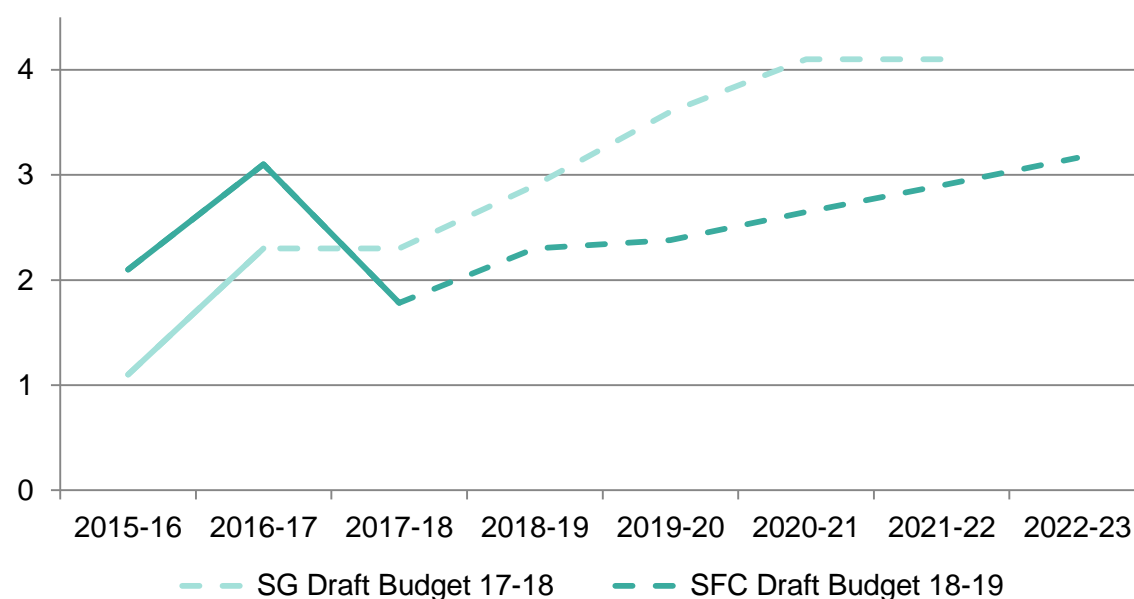


Source: Scottish Fiscal Commission and Scottish Government (2016) Devolved Taxes – Forecasting Methodology ([link](#))

2.175 The Commission forecasts the employment level to grow at a similar rate to the previous Scottish Government forecasts, though starting from a higher base because of outturn data.

2.176 Figure 2.25 compares forecasts of average nominal earnings.

Figure 2.25: Forecast comparison, average nominal earnings, financial year growth rate (%)



Source: Scottish Fiscal Commission and Scottish Government (2016) Devolved Taxes – Forecasting Methodology ([link](#))

2.177 Nominal earnings have grown more strongly than previously expected in 2015-16 and 2016-17, pushing up growth in average nominal incomes. This has led to a stronger forecast of income tax revenues for 2015-16 and 2016-17. However, the Commission expects a flatter and slower growth profile for nominal wages, and therefore average nominal earnings, over the forecast horizon.

2.178 The impact of these changes on the fiscal forecasts are set out in Chapter 3.

Comparison to OBR UK forecasts

2.179 This section compares our economic forecasts for Scotland with OBR's forecasts for the UK.

2.180 We are forecasting a weaker economic outlook for Scotland compared to the OBR's forecast for the UK. This is primarily because of slower growth in population and slower growth in productivity than the UK.

2.181 Table 2.11 summarises the forecasts for Scotland and the UK by the Commission and the OBR for five of the main economic determinants: GDP growth, GDP per capita growth, employment level, real hourly wage growth and nominal annual earnings growth.

Table 2.11: Comparison of SFC December 2017 Scottish economy forecasts with OBR November 2017 UK economy forecasts, calendar year, % year on year growth unless otherwise stated

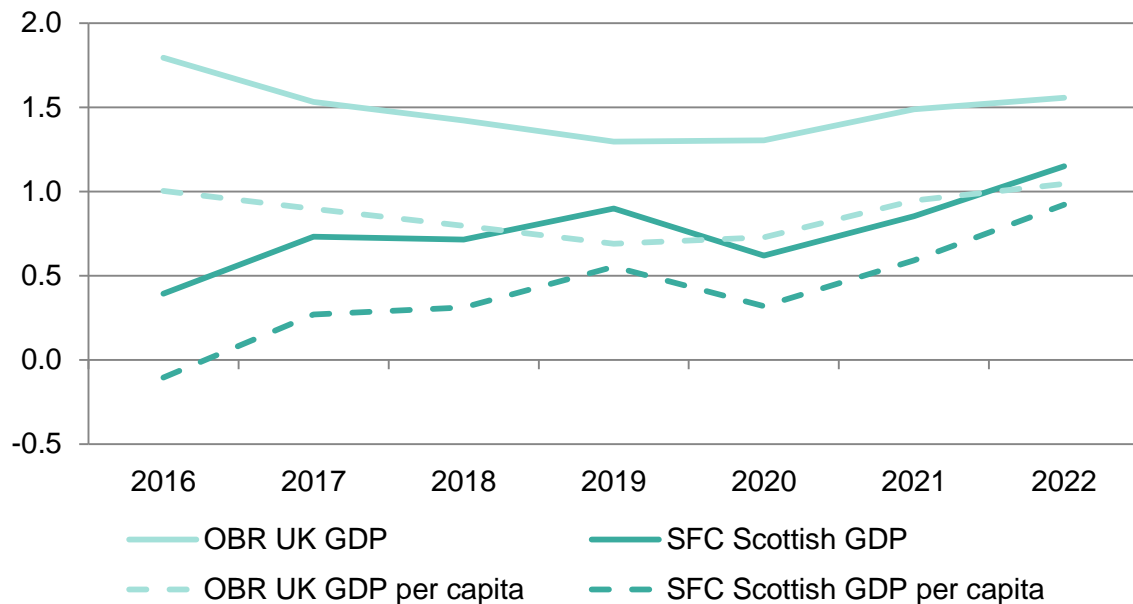
		2016	2017	2018	2019	2020	2021	2022
GDP	OBR November 2017	1.8	1.5	1.4	1.3	1.3	1.5	1.6
	SFC Dec 17	0.4	0.7	0.7	0.9	0.6	0.9	1.1
GDP per capita	OBR November 2017	1.0	0.9	0.8	0.7	0.7	0.9	1.0
	SFC Dec 17	-0.1	0.3	0.3	0.6	0.3	0.6	0.9
Employment (millions)	OBR November 2017	31.7	32.1	32.3	32.4	32.5	32.6	32.7
	SFC Dec 17	2.6	2.6	2.7	2.7	2.7	2.7	2.7
Real hourly wages	OBR November 2017	1.7	0.3	-0.1	0.7	0.6	1.0	1.0
	SFC Dec 17	2.1	-0.3	0.1	0.5	0.6	0.8	1.1
Nominal annual earnings	OBR November 2017	2.8	2.3	2.3	2.3	2.6	3.0	3.1
	SFC Dec 17	3.2	2.0	2.2	2.4	2.6	2.8	3.1

Source: Scottish Fiscal Commission and OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

2.182 Growth in Scottish GDP is expected to be significantly lower than in the UK. This is primarily because of slower population growth in Scotland. Growth in

per capita GDP in Scotland is expected to converge with the UK as shown in Figure 2.26.

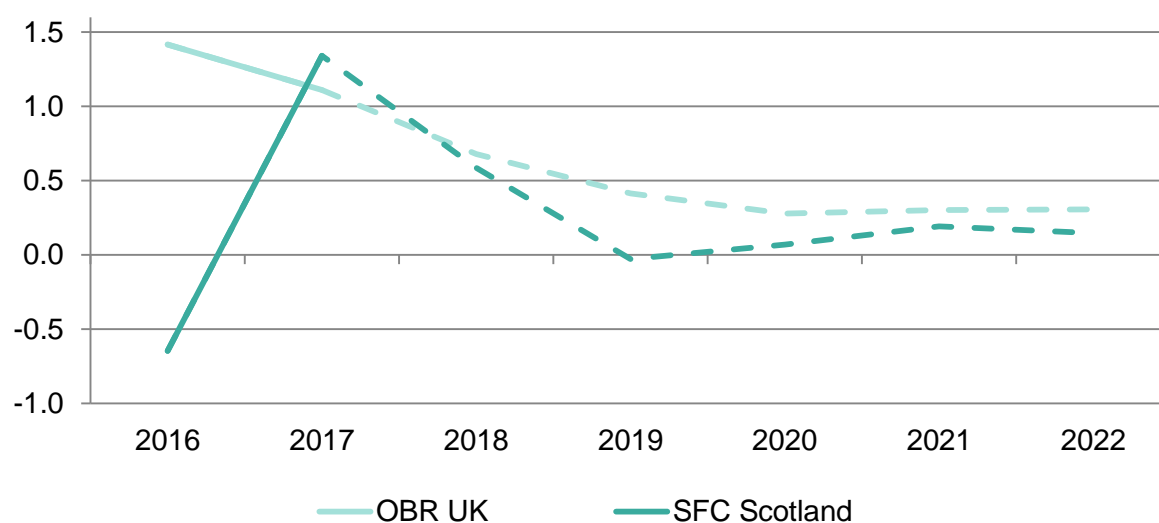
Figure 2.26: SFC December 2017 Scotland and OBR November 2017 UK forecast comparison, GDP and GDP per capita, calendar year growth rate (%)



Source: Scottish Fiscal Commission and OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

2.183 As shown in Figure 2.27, the Commission forecasts employment growth in Scotland below the OBR's forecast for the UK. Again, this is mainly because population is forecast to grow faster in the UK.

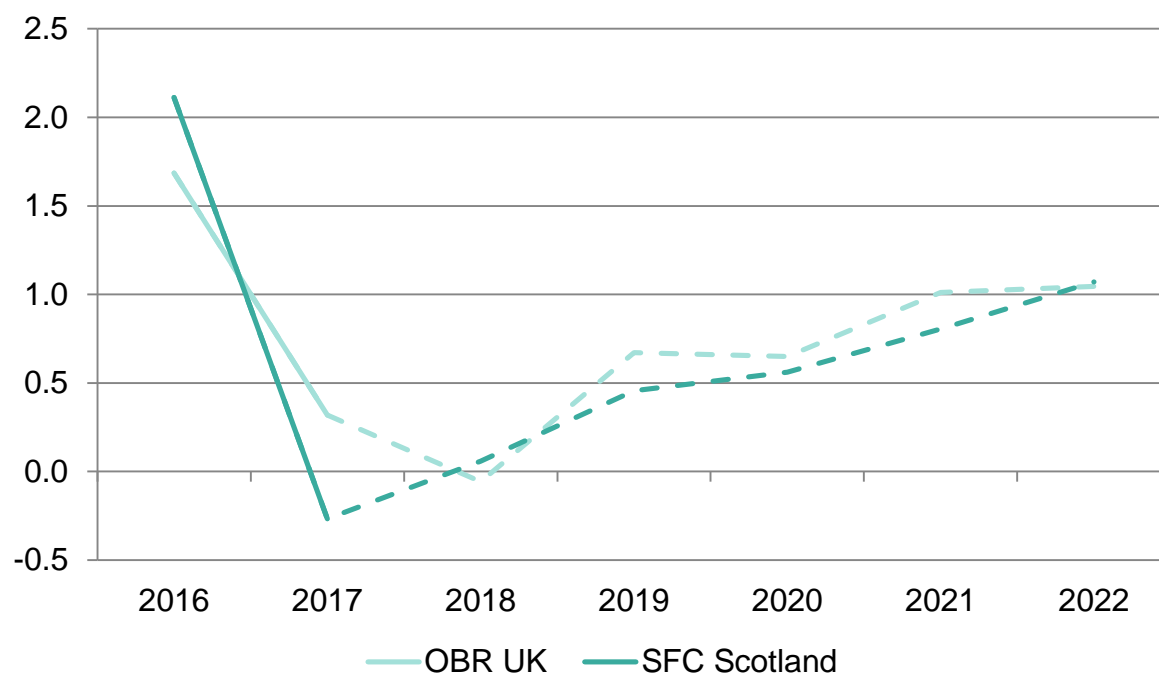
Figure 2.27: SFC December 2017 Scotland and OBR November 2017 UK forecast comparison, employment level, calendar year growth rate (%)



Source: Scottish Fiscal Commission and OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

2.184 Real wage growth is forecast to grow in a similar manner in Scotland and the UK. Scotland experiences slightly slower wage growth because of slower growth in productivity than in the UK as shown in Figure 2.28.

Figure 2.28: SFC December 2017 Scotland and OBR November 2017 UK forecast comparison, real wages, calendar year growth rate (%)



Source: Scottish Fiscal Commission and OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

2.185 Forecasts for the UK are an important component in the Commission's forecasts for Scotland. We will continue to monitor developments in the UK as a whole and reflect on what these mean for the outlook for Scotland.

Chapter 3

Tax

3.1 This chapter presents the Scottish Fiscal Commission's tax forecasts. A summary of the forecasts is shown in Table 3.1 below.

Table 3.1 Summary of Tax Forecasts 2016-17 to 2022-23

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Income Tax	11,214	11,584	12,115	12,582	13,084	13,662	14,296
Non-Domestic Rates	2,731	2,810	2,812	2,867	2,939	3,117	3,331
Land & Buildings Transaction Tax	484	557	588	628	668	707	748
<i>of which, Residential</i>	214	271	305	336	366	395	426
<i>ADS</i>	93	93	93	98	102	106	110
<i>Non-Residential</i>	177	193	190	194	200	206	212
Air Passenger Duty	264	292	306	314	324	336	348
Scottish Landfill Tax	148	137	106	88	90	82	82
Total Tax	14,842	15,379	15,928	16,480	17,105	17,905	18,805

Source: Scottish Fiscal Commission, * Figure for Income Tax is not outturn data, as none is yet available for liabilities in 2016-17. See the income tax section for further detail. Figures may not sum to totals because of rounding

3.2 In the following sections, each tax will be examined in turn. The sections will explain the methods used to produce the forecasts, the differences from earlier forecasts, the impacts of any new policy measures, and comparisons to OBR forecasts.

Box 3.1 OBR forecasts of devolved taxes

Box 1.2 explains the operation of the Fiscal Framework, and the respective roles of the Scottish Fiscal Commission and the OBR.

The OBR also produce forecasts of receipts from devolved taxes, not because this is a requirement of the Fiscal Framework but rather because their role as the UK-level fiscal forecaster requires them to produce forecasts of all revenue streams raised in the UK, whether they are set and administered by the UK Government, Devolved Administrations, or Local Government.

All forecasts of devolved taxes are set out in detail in their Devolved Taxes publication, which is produced alongside each UK fiscal event. At the Autumn Budget 2017 this included an illustrative estimate of expenditure on Carer's Allowance for the first time. As further social security benefits are devolved to the Scottish Parliament the OBR may expand their work into other social security expenditures.

In each tax section, differences to the OBR forecasts are discussed and explained, which may be because of modelling approaches, timing, data used or differences in judgements made.

As set out in Box 1.2, the OBR revenue forecasts of devolved taxes are not used as part of the block grant adjustment calculations which are based on the OBR forecasts of UK Government receipts of corresponding UK taxes.

3.3 The Commission was previously a non-statutory body, which was established in 2014 to scrutinise Scottish Government forecasts of devolved taxes following Scotland Act 2012. In December 2016, the Commission found the Scottish Government's forecasts of non-savings non-dividend Income Tax, Land and Buildings Transaction Tax and Scottish Landfill Tax to be reasonable. We also had a role in scrutinising the buoyancy and inflation elements of the Non-Domestic Rates forecast, which we found to be reasonable.³³

³³ Scottish Fiscal Commission (2016) non-statutory Report of Draft Budget 2017-18 ([link](#))

Income Tax

Forecast

Table 3.2: Scottish Non-Savings Non-Dividend outturn and forecast

£ million	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Outturn*								
	10,887	10,932	11,214	11,584	12,115	12,582	13,084	13,662	14,296

Source: Scottish Fiscal Commission *Outturn in this context for income tax refers to the Survey of Personal Incomes (SPI) data. See paragraph 3.8 for further details.

Background

- 3.4** The Scotland Act 2016 transferred new tax powers to the Scottish Parliament. From 2017-18, the Scottish Parliament took full responsibility for non-savings and non-dividend (NSND) income tax rates and thresholds, with the exception of the personal allowance.³⁴ Since April 2017, the Scottish Government receives all the revenue from income tax on the NSND income of Scottish taxpayers.
- 3.5** The responsibility for defining the income tax base, including setting or changing income tax reliefs and the personal allowance continues to rest with the UK Government. HMRC remains responsible for the collection and management of Scottish income tax. It is HMRC's responsibility to decide who is and who is not a Scottish taxpayer as provided for in legislation. The Scotland Act 2012 defines a Scottish taxpayer as someone who is a UK taxpayer and has their main place of residence in Scotland.³⁵
- 3.6** For 2017-18, the first year of operation of the Scotland Act 2016 income tax powers in Scotland, most rates and bands were set at the same level as the UK. The only difference was the higher rate threshold, which was unchanged in cash terms at £43,000 from its 2016-17 UK value – below the level set by the UK Government of £45,000.
- 3.7** This section sets out our forecast of NSND income tax liabilities in Scotland. The Scottish Government has announced new rates and bands for income tax at the Draft Budget 2018-19. The fiscal implications of these policies are also set out in this section.

³⁴ This is primarily income from employment, pensions and property

³⁵ Scotland Act 2012, Section 25, 80D ([link](#))

Modelling approach

- 3.8 Our approach to creating the income tax forecast was set out in our ‘Current Approach to Forecasting’ publication.³⁶ The modelling is based on detailed taxpayer data published by HMRC called the Survey of Personal Incomes (SPI). The latest available SPI is for 2014-15. We use outturn economic data for income and earnings from other sources to estimate changes in the number of taxpayers, their incomes and tax liabilities to 2016-17. From 2017-18 onwards, we then use the Commission’s economy forecasts covering earnings and employment to make estimates of incomes and therefore tax liabilities in future years.
- 3.9 A single statistical model is unlikely to address all of the issues in a forecast. So, in addition, a number of ad-hoc adjustments are applied to this baseline forecast to account for issues such as Tax Motivated Incorporations (TMI), Gift Aid and the range of behavioural responses to previous policy, including tax avoidance and evasion.
- 3.10 For our baseline pre-measures forecasts, a certain degree of avoidance and evasion behaviour is already captured in our income tax datasets, as we only receive data on income that have been reported for taxation. We then capture additional changes in behaviour over time, such as recent increases in TMI, and also efforts of the UK Government and HMRC to reduce tax avoidance and evasion.
- 3.11 We then model behavioural responses to changes in tax policy. This is discussed in the section on policy changes.
- 3.12 In addition to our underlying methodology outlined in the Current Approach to Forecasting paper, we have undertaken additional analysis and modelling in the following areas:
- Tax Motivated Incorporations
 - UK tax policy adjustments
 - Public sector wage growth
 - Real Time Information data
- 3.13 These are discussed in turn below. Further technical details of our methodology and modelling approach will be set out in a separate paper – due for release in early 2018.

³⁶ Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

Tax Motivated Incorporations (TMI)

- 3.14 Throughout the UK there has been a steady rise in the proportion of people working for themselves, rather than as an employee. Individuals who choose to work for themselves may be self-employed or have the option to incorporate and manage their business as directors of a limited company. In their 2017 Fiscal Risk Report, OBR outline how three people doing very similar work can face differing tax treatment depending on their employment classification. Employed individuals generally experience a higher tax burden.³⁷
- 3.15 This rise in people working for themselves places a downward pressure on the Scottish NSND forecast. A particular risk concerns those individuals who choose to incorporate. Depending on how the individual then structures their income within and outwith the company, they may pay corporation taxes on profits, income taxes on dividends taken out of the company, or income taxes on income taken out of the company as an employee. As corporation tax and income tax on dividends flows to the UK exchequer, the Scottish Government loses any taxes through these channels that might otherwise have been taxed through NSND income tax.
- 3.16 The Commission has been liaising with the OBR and HMRC on their TMI modelling work. The HMRC model aims to forecast the rising trend in incorporated owner-managers, in response to the incentives via the tax system. HMRC has provided the Commission with detailed modelling and projections of TMI behaviour in Scotland. We use these figures to adjust our forecast to capture the impact of growing TMI behaviour response.
- 3.17 For the previous forecast, an adjustment for incorporations was also made.³⁸ Following additional analysis this year, the Commission is now making a larger adjustment for TMI behaviour. These adjustments are shown in Table 3.3.

³⁷ OBR (July 2017) Fiscal Risks Report Para 5.5 p.110 ([link](#))

³⁸ Scottish Government (February 2017) forecast ([link](#))

Table 3.3: Tax motivated incorporations adjustment

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
SG February 2017	-41	-68	-102	-136	-164	-212
SFC December 2017	-136	-178	-239	-297	-354	-440
Difference	-95	-110	-137	-161	-190	-228

Source: Scottish Government, Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

UK Government policy measures

- 3.18** We need to make additional adjustments to the forecast for certain policy measures introduced by the UK Government which will have an effect on Scottish NSND income tax liabilities that we cannot capture directly in our income tax modelling.
- 3.19** One example is the pension flexibility measure announced by the UK Government at the Spring Budget 2014. This allows individuals to withdraw some of their pension savings at their marginal tax rate. In the UK, at the time, this was forecast to raise £910 million additional income tax revenue in 2017-18.³⁹ However, we do not have sufficient information on pensions of Scottish income taxpayers to model this change directly.
- 3.20** We have developed an approach that calculates the relevant adjustments needed to the Scottish NSND forecast to account for previous UK Government policy measures that have affected income tax revenues since 2014-15, the latest year for which full SPI data are available. This uses the OBR policy measures database, applying appropriate shares of these costings to Scotland.
- 3.21** In addition to past policy measures, we account for new policy measures announced in the UK Spring Budget 2017. We use the OBR's assessment of the new UK Government policies which have an effect on the Scottish NSND forecast.⁴⁰ Table 3.4 presents the adjustments that were made.⁴¹

³⁹ OBR Policy Measures Database ([link](#))

⁴⁰ Table 2.6, OBR (November 2017) Devolved taxes forecast ([link](#))

⁴¹ The Scottish Government only included 'new' policy measures announced at the time of Autumn Statement 2016 (not previously announced measures).

Table 3.4: Adjustment for UK Government policies affecting income tax not directly captured

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
SG February 2017	0	12	28	39	26	26
SFC December 2017	86	123	176	253	248	273
Difference	86	111	148	214	222	247

Source: Scottish Government, Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

Public sector wage growth assumption

- 3.22** We forecast earnings growth in the private and public sector separately. Public sector earnings in Scotland are made up of both the devolved public sector and the reserved public sector.⁴² Around 90 per cent of public sector workers in Scotland are part of the devolved public sector, with the remaining 10 per cent in the reserved public sector.⁴³
- 3.23** Since 2010, both the devolved and reserved public sector have been subject to pay restraint, most recently a 1 per cent public sector pay bill cap.
- 3.24** In the Draft Budget 2018-19 a new public sector pay award policy for 2018-19 was announced with a minimum 3 per cent pay award for those earning under £30,000, and 2 per cent on pay bill for all staff earning above £30,000. The Commission estimates this new pay policy will apply to around 260,000 public sector workers in Scotland, on a Full Time Equivalent (FTE) basis. The pay award does not cover Local Government or UK Civil Servants working in Scotland. This is slightly over half of all workers in the public sector. Of these 260,000, around half earn less than £30,000 and half earn over this amount, implying an average pay award for these staff of just under 2.5 per cent.
- 3.25** As discussed in Chapter 2, the information on the public sector pay policy was not included in the economy forecasts. However, we adjust our public sector pay series in our income tax modelling to capture the direct impact on public sector earnings and therefore income tax revenues.
- 3.26** Basic pay awards are only one factor affecting average public sector pay bills. For the forecast years before 2018-19, we assume growth in average public sector pay of 1.9 per cent, based on our analysis of the available income tax

⁴² Devolved Public Sector consists of the following staff groups: Civil Service, Other Public Bodies, NHS, Further Education Colleges, Local Government and Public Corporations. Reserved Public Sector consists of the following staff groups: Civil Service (reserved Government departments such as HMRC, DWP), Public Bodies, Armed Forces, Public Corporations, Public Sector Financial Institutions.

⁴³ Public sector employment in Scotland - Statistics for 2nd Quarter 2017 ([link](#))

data. For 2018-19, we estimate an average 3.2 per cent change in public sector pay bill for all public sector workers in Scotland.

- 3.27 The Scottish Government did not provide any information on pay awards after 2018-19, and the Commission must therefore make a judgement on pay awards for later years of the forecast. Without further information, the Commission assumes an average 2 per cent pay award for those staff in scope of the 2018-19 pay policy from 2019-20 onwards. This is in line with historic basic pay awards prior to 2008. The final series of growth in average public sector pay is shown in Table 3.5.

Table 3.5: Forecast growth in average public sector pay in Scotland (%)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017	1.9	3.2	2.9	2.9	2.9	2.9

Source: Scottish Fiscal Commission

- 3.28 The forecast of private sector wages comes from the economy forecasts detailed in Chapter 2.

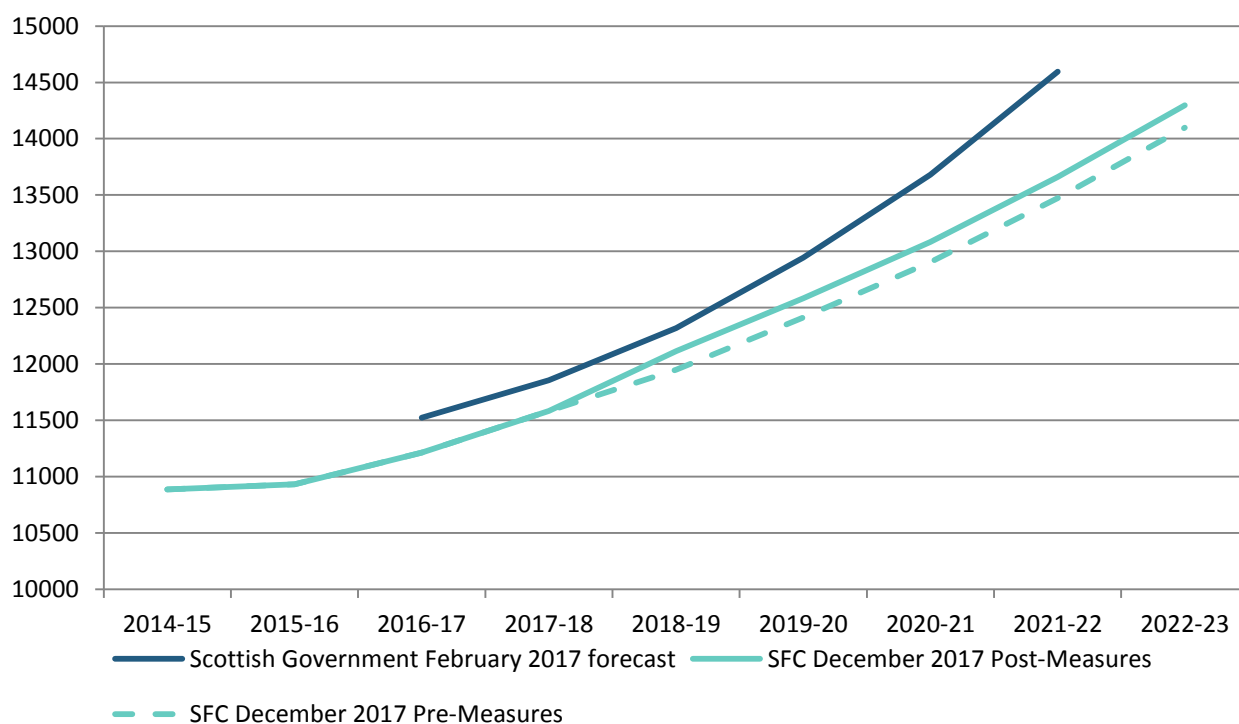
HMRC Real Time Information Data

- 3.29 HMRC have been developing more timely estimates of Scottish income tax liabilities than currently available from the SPI. In August, HMRC provided the Commission and the Scottish Government with their first internal provisional estimates of in year income tax data from its 'Real Time Information' (RTI) system, covering the months from April 2016 to May 2016.
- 3.30 RTI data offer a potentially valuable source of real time information on income tax liabilities in Scotland. However, RTI is a new source of data and also has some drawbacks. For example, RTI only covers PAYE liabilities. We have some reservations about using these data to adjust our forecast at this time, and so we make no direct adjustments to our forecast using the RTI data.
- 3.31 We will continue to monitor the data provided by HMRC, with a view of starting development work to further assess whether the data can help inform our forecasts.

Forecast

3.32 The chart below illustrates how the forecast has changed in comparison to the Scottish Government's February 2017 forecast, including the impact of announced income tax policy changes.⁴⁴

Figure 3.1: Comparison of SFC's Income Tax Forecast with SG Forecast (£ million)⁴⁵



Source: Scottish Government, Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

3.33 Table 3.6 presents in more detail the differences between the Scottish Government February 2017 and the Commission's income tax forecasts.

⁴⁴ Scottish Government (February 2017) forecast ([link](#))

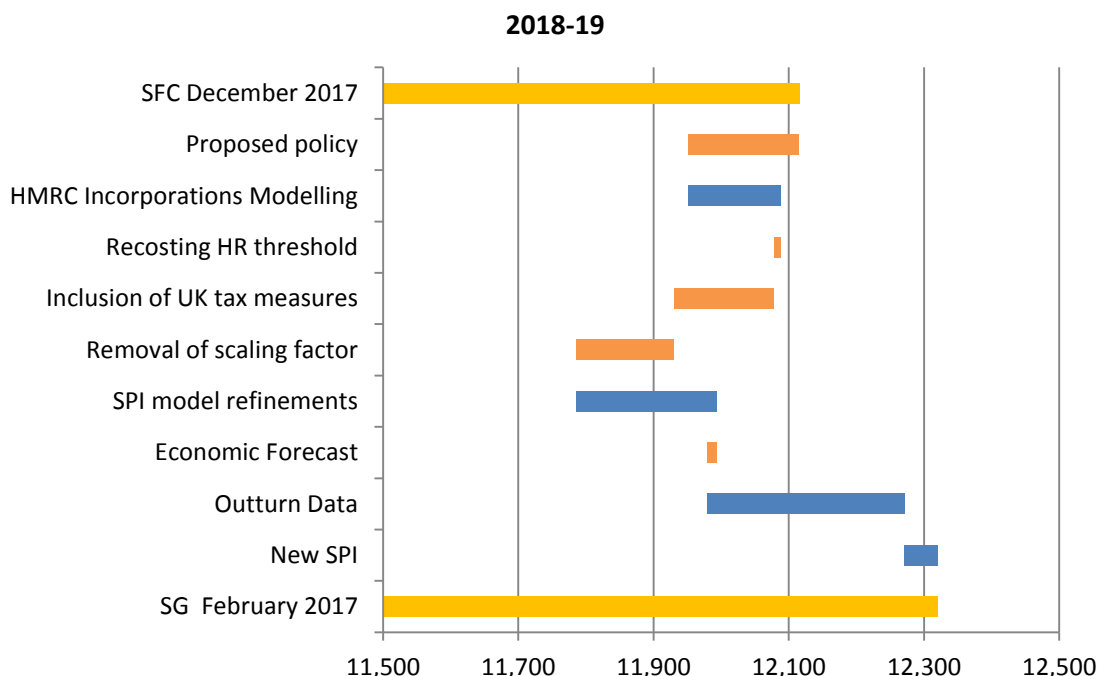
⁴⁵ Although the Scottish Government did not formally publish the forecast for 2016-17, we used the information that was produced in their forecast.

Table 3.6: Scottish NSND income tax

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
SG Feb 2017	11,525	11,857	12,320	12,943	13,681	14,595
New SPI	-46	-48	-49	-49	-49	-49
Outturn Data	-223	-240	-292	-310	-331	-352
Economic Forecast	0	66	14	-195	-429	-723
SPI Model Developments	-168	-187	-207	-231	-258	-288
Scaling Factor	135	139	144	152	160	171
U.K. Tax Measures	86	111	148	214	222	247
Incorporations	-95	-110	-137	-161	-190	-228
Recosting HR Change		-4	10	50	99	101
SFC Dec 2017 pre-measures	11,214	11,584	11,951	12,413	12,906	13,474
Dec 17 Policy Measures			164	170	178	188
SFC Dec 2017 post-measures	11,214	11,584	12,115	12,582	13,084	13,662
<i>Change from February 2017</i>	<i>-311</i>	<i>-273</i>	<i>-205</i>	<i>-361</i>	<i>-597</i>	<i>-933</i>

Source: Scottish Government, Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission.
Figures may not sum to totals because of rounding

3.34 The table shows a range of modelling factors and developments have changed the forecasts since those produced last year. Figure 3.2 presents the relative scale of these factors for 2018-19.

Figure 3.2: SG Feb 17 NSND income tax liabilities forecast compared to SFC forecast by factor, 2018-19, £ millions

Source: Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

3.35 The bottom line represents the Scottish Government February 2017 forecast amounting to about £12.3 billion. The Commission has made revisions to a

number of elements of the forecast. These are discussed below.

SPI data

- 3.36 In February 2017 the Scottish Government used 2013-14 SPI data, the latest available at the time. We are now using 2014-15 data, which is the latest available. The 2014-15 dataset suggested slightly lower tax liabilities in Scotland, reducing our forecast by around £50 million in each year of the forecast.

Outturn economic data

- 3.37 From the starting point of SPI data in 2014-15, the Commission uses information from multiple sources to capture the impact of changes in earnings and employment on income tax liabilities in 2015-16 and 2016-17. Overall, growth in Scottish earnings and employment has been weaker than anticipated in the Scottish Government forecast. The impact of these outturn years carries through into later years in the forecast, leading to a reduction in income tax liabilities of between £220 million and £350 million as compared to previous Scottish Government forecasts.

Economy forecast

- 3.38 From 2017-18 onwards, the Commission's income tax forecasts are primarily driven by the forecast of the economy discussed in Chapter 2. These forecasts show a slowing of economic growth, with slower growth in earnings and employment compared with Scottish Government's December 2016 economic forecast. By 2021-22, the new economy forecasts lead to income tax liabilities around £723 million less than forecast by the Scottish Government in February 2017. However, because of strong outturn data for employment in 2017-18 so far, the economy forecasts in isolation lead to a slight increase in estimated income tax liabilities of £66 million.

SPI model developments

- 3.39 Over the year the Commission has made a number of technical developments and improvements to our income tax model. This has resulted in downward revisions to the income tax forecast of £170 million to £300 million. Developments have included the way deductions are forecast and calculated in estimating tax liabilities. There have been other smaller changes such as

the way the personal allowance taper was calculated, and the inclusion of the latest savings and dividends policies.

Scaling factor

3.40 The Scottish Government produced income tax forecasts in December 2016 and February 2017. The Scottish Government aligned their estimate of income tax liabilities in 2016-17 with the corresponding year of the published OBR November 2016 Devolved taxes forecast.⁴⁶ This adjustment to the 2016-17 figure was carried through the forecast into future years. Table 3.7 shows this adjustment.

Table 3.7: Scottish Government income tax forecast and scaling adjustment

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Scottish Government pre adjustment	11,660	11,996	12,465	13,095	13,841	14,766
OBR November 2016	11,525	11,768	12,220	12,770	13,432	14,181
Scottish Government post adjustment	11,525	11,857	12,320	12,943	13,681	14,595
Total Adjustment	-135	-139	-144	-152	-160	-171

Source: Scottish Government, Scottish Government (February 2017) forecast ([link](#)), OBR (November 2016) Devolved taxes forecast ([link](#)). Figures may not sum to totals because of rounding

3.41 The application of this scaling factor resulted in a downward revision to the Scottish Government's forecasts at the time.

3.42 The Scottish Fiscal Commission is required to produce its best forecast of Scottish income tax liabilities. We have done this through detailed analysis of Scottish specific factors and have not applied any scaling adjustment to our forecast to align with the OBR.

2017-18 Higher Rate threshold policy recosting

3.43 Following on from the modelling and data updates, we have revised the Scottish Government's previous Higher Rate (HR) Threshold costing. Detail of

⁴⁶ OBR (2016) Autumn Statement 2016 Devolved taxes forecast ([link](#))

our latest costing is set out in the supplementary tables. The main difference between the two costings is the assumed path of the UK Government's personal allowance.

3.44 For the Scottish Government's forecast in February 2017, the costing assumed that the personal allowance would meet the Conservative manifesto pledge of reaching £12,500 by 2020.⁴⁷ We have revised this judgement, and now assume that the Personal Allowance will follow the pathway as assessed by the OBR, currently updated by OBR forecasts of September CPI. As this Personal Allowance is lower than previously assumed, our estimate of the forecast increases in 2021-22 by around £100 million.

Scottish policy changes

3.45 In the Draft Budget 2018-19 the following income tax policy was announced:

- segment the existing Basic Rate band into three separate bands with tax rates of 19 per cent, 20 per cent and 21 per cent, with the names shown below;
- increase the Higher Rate by 1 percentage point; and
- increase the Additional Rate by 1 percentage point, and rename as the Top Rate.

Table 3.8: Scottish Government's proposed income tax policy (2018-19)

Gross Income (£)	New Categorisation	New Tax rate (%)	Previous Categorisation	Previous Tax Rate (%)
11,850 - 13,850	Starter Rate	19	Basic Rate Taxpayer	20
13,851 - 24,000	Basic Rate	20		
24,001 - 44,273	Intermediate Rate	21		
44,274 - 150,000	Higher Rate	41	Higher Rate Taxpayer	40
Above 150,000	Top Rate	46	Additional Rate Taxpayer	45

Source: Scottish Government

3.46 We have costed this policy for inclusion in our post-measures forecast. Full technical details of this policy costing can be found Annex A. The headline results are set out in Table 3.9.

⁴⁷ 2017 Conservative manifesto ([link](#))

Table 3.9: Costing of Scottish Government's proposed income tax policy

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Static costing ⁴⁸	215	224	235	249	264
Behavioural response	-51	-54	-57	-61	-65
Policy costing	164	170	178	188	199

Source: Scottish Fiscal Commission

3.47 An important aspect of this policy costing is the estimated behavioural response from taxpayers. We discuss our evidence base for this modelling below.

Behavioural responses – Taxable Income Elasticities

3.48 Changes in income tax policy may lead to behavioural responses from taxpayers. Where there is a change in policy, we undertake additional modelling to capture any potential behavioural responses. These may take various forms, such as tax avoidance, evasion, migration or a reduction of labour supply. These responses can be large at the top of the income distribution. The behavioural response among lower income taxpayers to changes in marginal taxes is judged to be low.

3.49 Predicting behavioural responses in Scotland is subject to significant uncertainty. Particular issues include:

- Historic variations in taxable income because of specific policy changes are difficult to isolate from those arising from other factors, such as changes in macroeconomic conditions;
- Behavioural responses are likely to vary over time and across countries;
- Behavioural responses will depend on the exact details and context of any particular policy change; and,
- Limited direct evidence is available for Scotland.

3.50 We primarily account for these behavioural responses through the use of Taxable Income Elasticities (TIEs).⁴⁹ TIEs provide an aggregated estimate of

⁴⁸ The static costing is defined as the expected revenue of the policy assuming no taxpayer behavior in response to the change.

⁴⁹ A TIE captures the percentage change in a taxpayer's taxable income in response to a 1 per cent change in their marginal retention rate (MRR), calculated as 1 minus their marginal tax rate.

the response of taxpayers to changes in the tax rate capturing a range of different possible behaviours.

- 3.51 We developed our TIEs by reviewing the existing literature and thorough discussions with external experts. Our approach draws on recent studies by HMRC, and the estimates by the Institute for Fiscal Studies (IFS) on across the UK.⁵⁰ We detail our TIEs in Table 3.10.

Table 3.10: SFC Taxable Income Elasticities profile for Scotland

Taxable Income Start (£)	Taxable Income End (£)	Intensive Elasticity	Extensive Elasticity
Low	Basic Rate Limit ⁵¹	0.015	0
Basic Rate Limit	80,000	0.100	0.06
80,001	150,000	0.200	0.06
150,001	300,000	0.350	0.25
300,001	500,000	0.550	0.25
500,001	High	0.750	0.25

Source: Scottish Fiscal Commission

- 3.52 Our TIEs are somewhat higher at the top end of the income distribution than HMRC's central estimates for the UK. We see there being a particular risk that very high income individuals in Scotland might be able to relocate to other parts of the UK in response to any changes in the additional rate of income tax.

Behavioural responses – forestalling

- 3.53 In addition to the behaviour described above, taxpayers anticipating changes in tax rates also have a one-off opportunity to shift the timing of income between one tax year and another to reduce the amount of income taxed at the higher rate in the later year. This may be a particular issue for the increase in the additional rate of tax from 45 per cent to 46 per cent, creating an incentive to bring income forward from 2018-19 into 2017-18.
- 3.54 For the announced policy change of a one percentage point increase in the additional rate of tax to 46 per cent, the Commission's judgement is that this is unlikely to lead to a significant amount of forestalling behaviour. The Commission therefore does not make any forestalling adjustment to our

⁵⁰ See: HMRC (2012) 'The Exchequer effect of the 50 per cent additional rate of income tax' ([link](#)); and IFS (2017) 'Estimating the responsiveness of top incomes to tax: a summary of three new papers' ([link](#))

⁵¹ The 'Basic Rate Limit' in Scotland for 2017-18 is £31,500.

forecast for this policy option. The analysis behind this judgement is discussed below.

- 3.55 Prior to Draft Budget 2018-19, the Scottish Government produced a discussion paper that outlined a number of approaches to income tax, including increases in the additional rate of up to 50 per cent.⁵² As a result, the Commission developed new forestalling analysis and modelling for a range of changes to the additional rate.
- 3.56 Some additional rate taxpayers have the ability to shift NSND income tax between tax years. Examples of the possible mechanisms include: the timing of bonuses, company owners/directors moving their income received as an employee, and company share schemes. While the opportunities for changing the timing of NSND income may be more limited compared to income from savings and dividends, evidence from HMRC shows significant forestalling of NSND income did take place following the introduction of the additional rate of tax at 50 per cent in 2010-11.
- 3.57 The analysis starts with the modelling produced by HMRC and the OBR of the forestalling response to the introduction of the 50 per cent additional rate.⁵³ First, this forestalling response is adjusted for the relative size and income of the Scottish additional rate population. We then consider the timing of the announcement and the size of the change in tax.
- 3.58 For the introduction of the 50 per cent additional rate of tax in 2010-11, taxpayers had around twelve months to respond. The later the announcement of a change in taxes, the less time taxpayers have to change their behaviour and shift the timing of income. The Scottish Government's additional rate policy has been announced with over three months before the end of the tax year. Our judgment is that taxpayers will have sufficient time to bring forward their income, and no adjustment is made to account for the difference between twelve months' notice and three.
- 3.59 The greater the difference between tax rates in one year and another, the greater the incentive for taxpayers to forestall. The Commission's judgement is that the degree of forestalling will be highly non-linear between a one percentage point change and the ten percentage point change when the 50 per cent rate was first introduced. For small differences, the taxpayer behavioural change will be limited. At a point where the difference between tax rates is sufficiently large, forestalling activity will increase rapidly. With limited evidence, the Commission made a judgement on the degree of forestalling activity, relative to the 10 percentage point increase, for a range of

⁵² Scottish Government (2017) 'The role of income tax in Scotland's budget' ([link](#))

⁵³ HMRC (2012) 'The Exchequer effect of the 50 per cent additional rate of income tax' ([link](#))

potential policy changes. These are shown in Table 3.11, alongside the associated impact on income tax liabilities.

Table 3.11: Scottish Fiscal Commission forestalling assumptions and impact on income tax liabilities

Increase in additional rate (% point)	Relative degree of forestalling (%)	Taxable income shifted (£m)	Gain of tax liabilities in 2017-18 (£m)	Loss in tax liabilities in 2018-19 (£m)	Net loss (£m)
1	0	0	0	0	0
2	25	42	19	20	1
3	50	84	38	41	3
4	75	127	57	62	5
5	80	135	61	68	7

Source: Scottish Fiscal Commission

3.60 The relative degree of forestalling is the amount of forestalling that takes place relative to the baseline case of the 10 percentage point change analysed by the OBR and HMRC, after appropriate adjustments for Scotland. While the Commission considers forestalling activity to be significant for larger changes in the additional rate, the Commission's judgement is that the impact of forestalling activity for a one percentage point change is not of sufficient magnitude to include an adjustment.

3.61 The Commission will keep these models and underpinning judgements under review.

Forecast Uncertainty

3.62 In this section, we assess the sensitivity of our NSND income tax forecast to the alternative economy scenarios considered in the economy chapter. The results of this analysis are shown in Table 3.12.

Table 3.12: Average percentage variance of income tax forecast liabilities to economic scenarios across forecast horizon

	Low variant	High variant
Migration	-0.27	0.28
Unemployment	0.32	-0.54
Average hours	-1.44	1.89
Productivity	-1.92	6.71

Source: Scottish Fiscal Commission

3.63 Further changes in income tax receipts are most sensitive to changes in our assumption about productivity growth. In the high productivity scenario, income tax revenues are on average estimated to be 6.71 per cent higher over the forecast horizon. Productivity is one of the most significant risks to our NSND forecast.

Comparisons to OBR forecasts

3.64 In Box 3.1 we explained that OBR produce forecasts of devolved tax revenues, including for NSND Income Tax.

3.65 Table 3.13 below details the latest OBR forecast as presented in their November 2017 devolved taxes forecast and the difference between our forecast in this publication.

Table 3.13: Scottish NSND forecast OBR & SFC

£ million	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
OBR November 17	10,894	11,138	11,520	11,932	12,153	12,462	12,943	13,432	13,935
SFC December 17	10,887	10,932	11,214	11,584	12,115	12,582	13,084	13,662	14,296
Difference	-7	-206	-306	-348	-38	120	141	230	361

Source: OBR (November 2017) Devolved Taxes Publication ([link](#)), Scottish Fiscal Commission

3.66 Our forecast is significantly lower between 2015-16 to 2017-18, with a turning point in 2019-20 after which our forecasts are higher. There are a number of reasons why our forecasts are different:

- **Modelling differences:** In our forecasts we use a ‘bottom-up’ micro simulation forecast based on our SPI model. This allowed the Commission to develop an income tax model which is suitable for Scottish demographics and the distribution of tax-payers. The OBR (or HMRC on their behalf) utilises a ‘top-down’ approach by first producing a forecast of the NSND income tax for the whole UK and then estimating a Scottish share which is applied to this forecast. For example, our forecasts account for the change of demographics within age groups. In the circumstance of an ageing population, one may expect to see falls in the 16 to 24 population, meaning more of the working population are in their 30s, 40s and 50s who tend to pay more tax. This would be a temporary boost, but a longer term drag on the revenue generation as you have less people coming into these tax-paying age groups.
- **Data:** Our forecasts are based on the 2014-15 SPI information, and are projected forward using Scottish specific economic determinants which we produce as part of our economy forecasts. The OBR forecast of future earnings growth is based on UK economic determinants. In addition, they partly adjust their UK income tax forecast based on the available 2015-16, 2016-17 and 2017-18 outturn receipts data for the UK. This will be correspondingly reflected in their Scottish NSND Forecast.
- **Scottish Government policy decisions:** OBR’s forecast does not account for the policy announcement made in this Draft Budget. This is because their forecasts were published on 22 November 2017.

Box 3.2 Calculation of the Income Tax Block Grant Adjustment (BGA)

The calculation of Block Grant Adjustment is governed by the Fiscal Framework Agreement and accompanying technical Annex. HM Treasury executes this agreement and calculates BGAs.

The income tax BGA figures will be calculated in the following way:

- Taking the outturn figure for 2016-17 (the ‘baseline adjustment’);
- Growing this figure by the growth in UK Government equivalent taxes per capita in 2017-18, to get the 2017-18 figure for the BGA;
- Growing the 2017-18 figure by the growth in UK Government equivalent taxes per capita in 2018-19, to get the 2018-19 figure for the BGA;
- ... and so on.

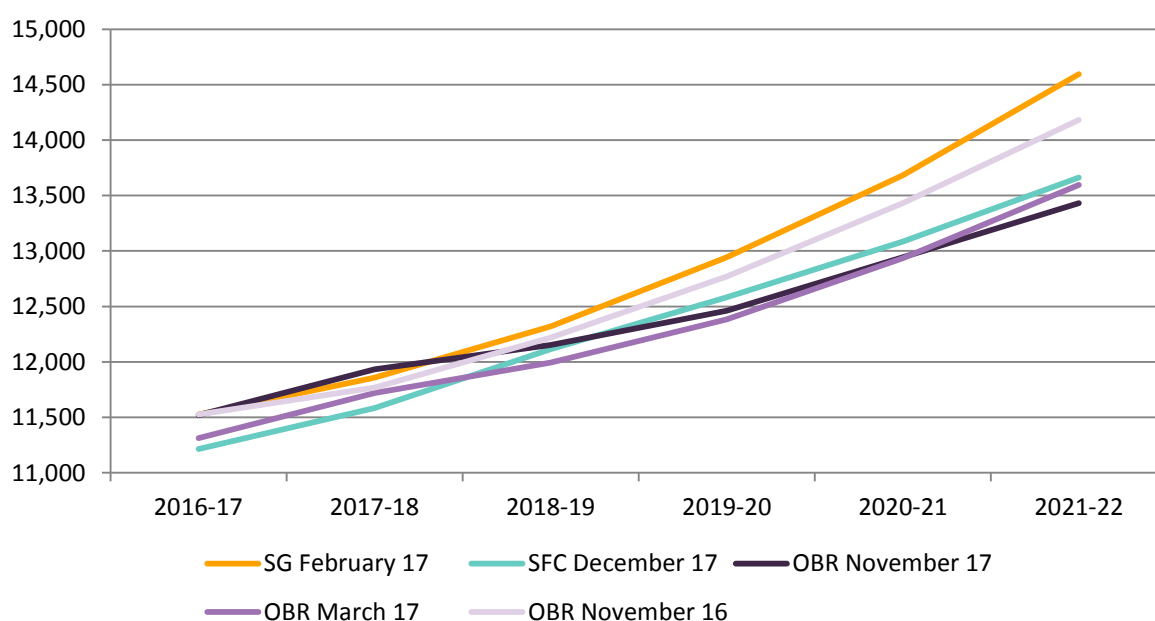
However, 2016-17 outturn data are not available until summer 2018. Until it is

available, a forecast will be used for the 2016-17 figure for the purposes of calculating the BGA.

HMT and the Scottish Government have agreed that for Budget 2018-19, until outturn data for 2016-17 are available in Summer 2018, it is sensible to use the same forecaster for both the baseline adjustment and the forecast for 2018-19. Therefore exceptionally for this Budget only the Commission's forecast for 2016-17 will be used as the initial deduction to calculate the BGA. In future years, the outturn figure for 2016-17 will be used.

3.67 Figure 3.3 compares the Commission's NSND income tax liabilities forecast with the previous forecast produced by the Scottish Government and the last three OBR forecasts of Scottish NSND income tax liabilities produced over the last 18 months.

Figure 3.3: Comparison of recent SFC, Scottish Government and OBR forecasts of Scottish NSND income tax liabilities



Source: OBR (November 2016) Devolved taxes forecast ([link](#)), OBR (March 2017) Devolved taxes forecast ([link](#)), OBR (November 2017) Devolved taxes forecast ([link](#)), Scottish Government, Scottish Government (February 2017) forecast ([link](#)), Scottish Fiscal Commission

3.68 The forecasts were produced using different methodologies at different times and have some differences in policy baselines.

3.69 Both the Commission and the OBR are now forecasting NSND income tax liabilities for Scotland which are significantly below previous forecasts produced in February 2017 and November 2016.

- 3.70 The Commission's forecast differs from the most recent OBR forecast, lower in earlier years of the forecast but higher in later years. This is for a number of reasons including differences in modelling, economic determinants used and policy.
- 3.71 We anticipate that the forecasts will continue to move in later years as the models develop and the economic outlook changes. We will evaluate our forecasts over time in our annual Forecast Evaluation Report.

Non-Domestic Rates

Forecast

Table 3.14: Forecast of Non-Domestic Rates

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	2,731	2,810	2,812	2,867	2,939	3,117	3,331

Source: Scottish Fiscal Commission

Background

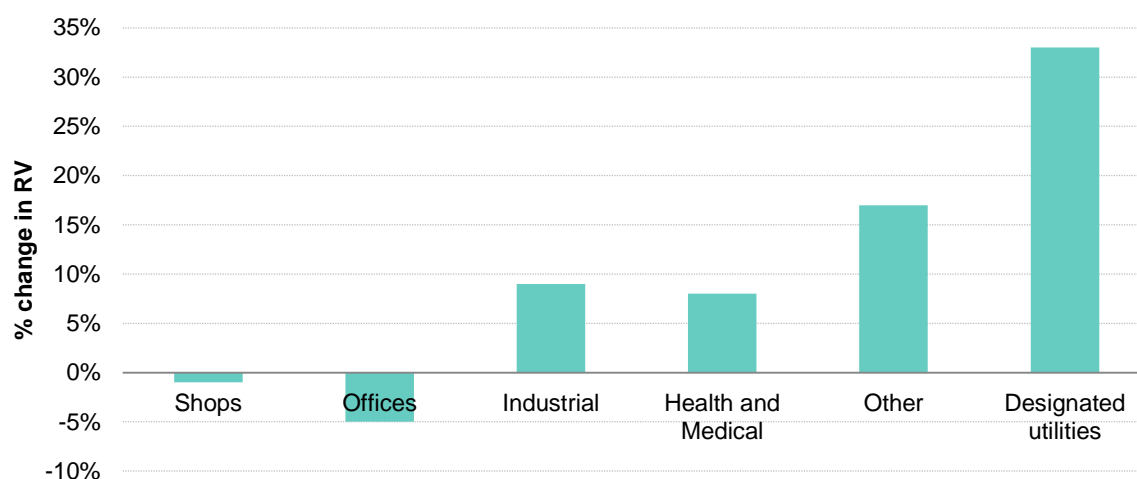
- 3.72** Non-Domestic Rates (NDR) are paid by the owner, tenant or occupier of non-domestic properties. The amount of tax paid is dependent on the rateable value (RV) of the property, the tax rate (also known as poundage) and any reliefs or exemptions that the property is eligible to claim. While Non-Domestic Rates are collected and ultimately spent by local authorities, the Scottish Government retains control over the administration of the tax. This includes control over decisions such as the poundage (the tax rate), the system of reliefs available to ratepayers, and the date at which a revaluation of properties will take effect.
- 3.73** A rateable value is assigned to every non-domestic property in Scotland (with some exemptions) by independent Scottish Assessors. The total rateable value of non-domestic properties in Scotland is the tax base for NDR. While the method used to assess RV depends on the type of property being valued, the RV can be thought of as being broadly equivalent to the annual rental value of the property in question.⁵⁴ Rateable values are reassessed on a regular basis, with every five years historically being the most common period in between revaluations.
- 3.74** Ratepayers have the right to appeal the RV of their property if they believe it should be lower than valued by the Assessor. In Scotland the main types of appeal are revaluation appeals, which can only be lodged within six months of a revaluation taking place, and running roll appeals which can be lodged at

⁵⁴ Detail of the methods used to value properties is available on the Scottish Assessors Association website ([link](#))

any time during the revaluation cycle.⁵⁵ Currently an appeal submitted by a ratepayer can only result in the rateable value of their property either being reduced or staying the same.

3.75 The most recent revaluation took place in 2017 and saw total RV increase by eight per cent between 31 March and 1 April 2017 when the new valuations came into effect. This rise in RV was not uniform across the tax base, with Designated Utilities - which are valued nationally by a single Assessor – seeing their RV increase by 33 per cent on average compared to 6 per cent for the rest of the tax base.⁵⁶ In total Designated Utilities contributed an estimated 36 per cent of the total growth in rateable value seen at the 2017 revaluation. This concentration of growth in the tax base has important consequences to our forecast, as the potential for a handful of successful revaluation appeals to significantly reduce the amount of NDR income collected is greater than a scenario where rateable value growth is more evenly distributed across the tax base.

Figure 3.4 Changes in Rateable Value (RV) at 2017 revaluation by sector



Source: Scottish Government (2017) Revaluation 2017 in Scotland ([link](#))

3.76 The report of the Barclay Review, published in August of this year, has a significant impact on our forecast. The report made 30 recommendations to the Scottish Government, which if implemented in full would result in significant changes to the administration of the tax. Some of the recommendations relating to reliefs available to ratepayers have been announced in this Draft Budget and are included in our forecast as policy

⁵⁵ Running roll appeals are lodged on the grounds of error, new interest, or a material change in circumstances. Appeals on the grounds of error must be lodged whilst the roll is in force. Appeals for MCC must be lodged no later than six months after the roll ceases to be in force.

⁵⁶ Legislation requires certain Utilities (Electricity, Gas, Fixed-Line Telecommunications, Docks and Harbours, Railways and Scottish Water) be valued at a national level by a designated assessor. See Non-Domestic Rating (Valuation of Utilities)(Scotland) Order 2005 ([link](#))

costings, along with a number of policy changes which were not part of the Barclay Review.

- 3.77 Specific detail on the implementation of the remaining recommendations the Government has committed to are currently being confirmed and these are not included in our forecast. Any subsequent changes to the rates system brought about following the Barclay Review will be included in our forecasts in future years.

Description of modelling approach

- 3.78 The approach to forecasting NDR was set out in detail in our paper in September 2017 and makes use of data from both the Scottish Assessors Association (SAA) and local authorities. Data from SAA are used to define the tax base on 1 April for the current year of our forecast. This is then projected forward, taking the long-run average of growth in the tax base with an adjustment made to reflect that this growth has typically been higher early in a revaluation cycle.⁵⁷ The forecasts of the tax base are then adjusted to account for the anticipated loss in RV to revaluation appeals in subsequent years. The amount and profile of appeals loss is based on historic data but can be adjusted for any specific intelligence regarding likely loss in income. The forecasted tax base is then multiplied by the poundage in each year to calculate Gross Income, with an assumed constant share of RV liable to pay the Large Business Supplement.
- 3.79 After forecasting Gross Income the next stage of the model deducts expenditure on the various reliefs available to ratepayers, as well as estimates of losses for various backdated payments and NDR receipts retained by local authorities. This stage uses outturn data from local authorities on these types of expenditure with relatively simple methods used to project this forward.⁵⁸ This results in an estimate of NDR income to be collected by local authorities.
- 3.80 To arrive at a five-year forecast for NDR income, a final step is required to model the impact of a revaluation on the tax base, which leads to changes in total rateable value and starts a new cycle of appeals. The Scottish Government have indicated to the Commission that the next revaluation can be expected to occur in 2022, which is year five of our forecast. The approach taken to modelling a revaluation this far in advance assumes that RV grows in

⁵⁷ One explanation to explain this is the resolution of running roll appeals, which are more likely to be resolved towards the end of cycle and so affect growth in the tax base in these years. Specific data are not available on running roll appeals to strip out the effect they have on the tax base between years.

⁵⁸ The approaches taken include moving averages of previous years expenditure and projections in line with changes to Gross Income.

line with the historic average at revaluation, with the poundage reduced so as to be revenue neutral.⁵⁹ With a revenue neutral poundage the only effect of a revaluation on income is through the resolution of revaluation appeals, which cause income to be higher early in the revaluation cycle and then reduced as increasing numbers of appeals are settled. By incorporating the revaluation cycle, our forecast should reflect the expected revenues collected in the absence of any policy changes by the Scottish Government.

Table 3.15: Impact of a revaluation on NDR Income

	Year 1	Year 2	Year 3	Year 4	Year 5
Percentage difference compared with no revaluation scenario	+4%	+2%	-1%	-2%	0%

Source: Scottish Fiscal Commission

Box 3.3 Contributable vs. Distributable Amount

The Commission forecasts what is known as the ‘contributable amount’ for Non-Domestic Rates, which can be thought of as being the amount collected by local authorities that subsequently flows to the Scottish Government. This is not the same as the amount ratepayers actually pay in a given year. Currently two schemes, the Business Rates Incentivisation Scheme and Tax Incremental Financing allow local authorities to retain part of the NDR income they collect, reducing the contributable amount. Similarly, certain discretionary relief schemes are part funded by local authorities and reduce the burden for ratepayers without affecting the contributable amount. These factors are relatively small, and the difference between contributable amount and what ratepayers pay was typically less than £10 million annually at the last revaluation cycle, or roughly 0.4 per cent of the contributable amount.

The contributable amount collected by local authorities is pooled at a national level, before being redistributed by the Scottish Government as part of the Local Government Finance Settlement. The amount of NDR income redistributed to local authorities as part of this settlement is known as the ‘distributable amount’.

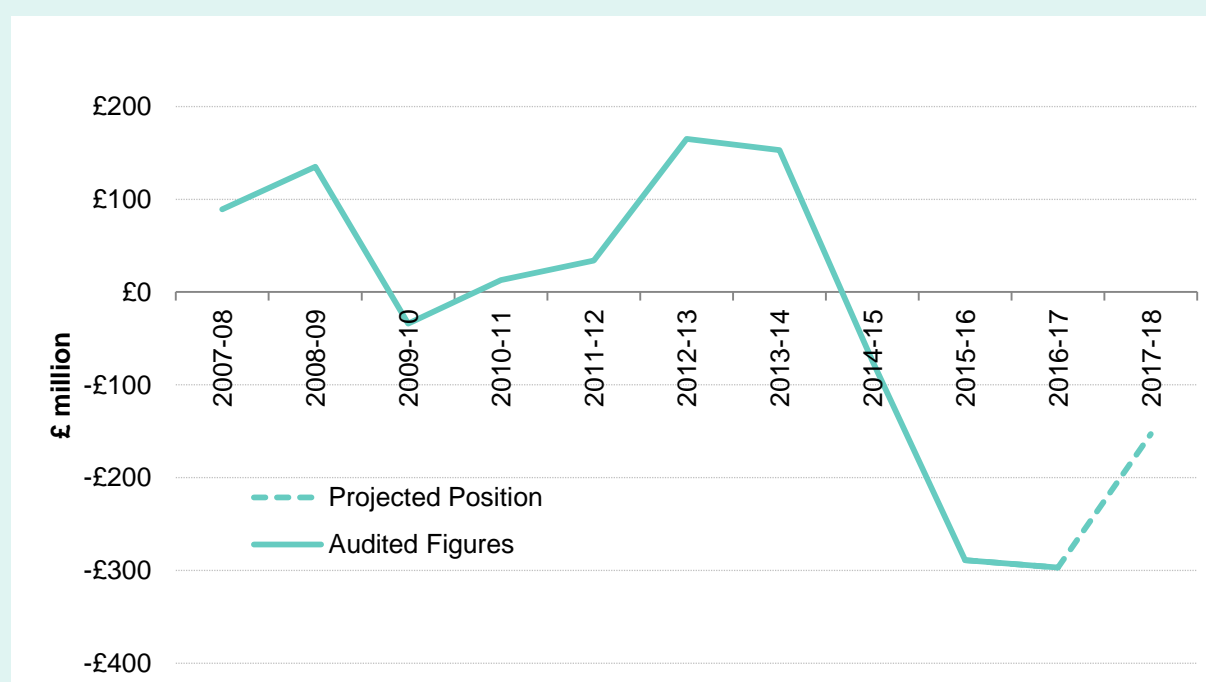
In any given year the contributable and distributable amounts will not be the same. The distributable amount is determined before the start of the financial year in question, and the actual amount of income raised, and retained, by local authorities

⁵⁹ The formula used to calculate revenue neutral poundage is defined in legislation covering England and Wales, Local Government Finance Act 1988, Schedule 7 Part 1 ([link](#))

can be higher or lower than expected. To manage this difference, the Scottish Government maintains what is known as the 'NDR Rating Account' or 'White Paper Account', which allows the Government to carry forward the surplus or deficit accrued from previous years as a result of the differences between the distributable amount and the outturn contributions from local authorities. The published audit of this account states that these differences are accrued to the Scottish Consolidated Fund.⁶⁰

The figure below shows that while prior to 2014-15 the pool was typically in surplus, in recent years a cumulative deficit has been carried forward, totalling £297 million in 2016-17.

Figure 3.5: Balance of NDR Rating Account at Year End, £ million



Source: NDR Rating Account 2008-09 to 2016-17 ([link](#)), Scottish Fiscal Commission

It is important to note the Commission only forecasts the contributable amount of NDR income. Decisions regarding the distributable amount are ultimately a policy choice for the Scottish Government, although this choice should be informed by the Commission's five-year forecast. Given the current position of the NDR pool it is possible the Government could choose to set the distributable amount lower than our forecast of the contributable amount in an attempt to move the pool back to a more balanced position. Audit Scotland advised in their report on the 2016-17 account that

⁶⁰ See page 4 paragraph 10, Scottish Government (2016) Non-Domestic Rating Account 2015-16 ([link](#))

the Scottish Government should develop and maintain a strategic plan of how it plans to manage the NDR account balance in the future.⁶¹

As part of our work to produce a five-year forecast of NDR income we produce an updated in-year forecast. For 2017-18 the Commission is forecasting £2,810 million will be collected by local authorities, while the Scottish Government set the distributable amount at £2,666 million for this year.⁶² Combining these figures with the latest published data on the NDR Rating Account for 2016-17 suggest the account will continue to be in deficit by an estimated £153 million at the end of 2017-18.

Forecast

3.81 The Commission's five-year forecast of NDR income is presented in the table below, showing how the forecast has developed since the Scottish Government's previous forecast from February 2017. The forecast has developed as a result of the inclusion of new data, changes to modelling, and the inclusion of shooting rights on the valuation roll. Policy Measures from the Scottish Government's Draft Budget 2018-19 are also shown.

Table 3.16 Non-domestic rates forecast

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG Feb 2017	2,731	2,816	2,910	2,936	3,014	3,198	
Data updates		+31	+15	+3	-9	-10	
Modelling changes		-13	+7	+11	+17	+13	
One-off telecoms loss		-30	-30				
Land reform costing		+6	+6	+6	+6	+7	
SFC Dec 2017 pre-measures	2,731	2,810	2,908	2,956	3,028	3,208	3,423
SG Dec 2017 policy measures		0	-96	-89	-89	-90	-92
SFC Dec 2017 post-measures	2,731	2,810	2,812	2,867	2,939	3,117	3,331

Source: Scottish Government, Scottish Fiscal Commission

⁶¹ See page 9 Audit Scotland (2017) The 2016-17 audit of the Scottish Government's Non-Domestic Rating Account ([link](#))

⁶² Scottish Government (2017) Budget Bill Supporting Document, Amendments to Supporting Document ([link](#))

Pre-measures forecast

- 3.82 Data updates have had a significant impact on the early years of forecast, and relate mainly to the inclusion of more up-to-date information on relief and backdated payment expenditure for 2017-18 from local authorities. Other changes, such as those relating to modelling are smaller and generally cover the method used to project forward outturn data as opposed to fundamental changes to the modelling approach.
- 3.83 The settlement of a number of appeals on both mobile and fixed line telecommunications entries on the roll, from the 2005 and 2010 revaluations, has reduced the forecast for 2017-18 and 2018-19 by £30 million in each year. This results from a 2014 judgment of the Court of Session on the scheme of valuation used on the rateable assets of telecoms suppliers.
- 3.84 Following agreement between the Assessors and industry in 2016, rebates have begun to be processed and represent a one-off reduction in NDR income to the in-year estimate and the first year of the five-year forecast. A further adjustment to the forecast has been made to take account of known in-year losses to revaluation appeals in 2017-18, which have been higher than historical patterns would suggest.
- 3.85 Another adjustment to the forecast has been made to reflect the addition of shootings and deer forests to the valuation roll.⁶³ These began to be entered onto the roll from September of this year and an adjustment is required to reflect the NDR income expected to be generated by entries. This has been calculated based on the net NDR bill for the entries already on the roll with an adjustment for the number of entries likely to claim rates relief through the Small Business Bonus Scheme. An additional assumption is made for entries still to be added on the roll, which are assumed to have the same net bill as the 1,000 largest shootings currently on the roll, reflecting intelligence from Assessors that many of the entries still to be made are for larger properties.
- 3.86 The largest judgement in the forecast relates to the assumption regarding loss in RV to appeal over the course of the revaluation cycle. The Commission is currently forecasting loss in RV to appeals to be one per cent higher than the historic average, because of the significant portion of growth in the tax base accounted for by designated utilities. This approach is consistent with the Scottish Government forecast in February 2017 and therefore does not show as a change in the table above.

⁶³ These have been added following the Land Reform (Scotland) Act 2016, part 6 ([link](#))

Description of Scottish and UK Government policy changes

3.87 A wide range of policy measures on NDR have been announced at the Draft Budget. These result, in part, from the Barclay Review of Non-Domestic Rates published in August 2017. The following measures are included in the Commission's forecast:

- Commitment to uprate the poundage in 2018-19 using September CPI instead of RPI. The Government had for planning purposes previously projected to make this switch from 2020-21 onwards. In the absence of any stated commitment from Government on their plans for 2019-20, we have assumed RPI will be used to uprate poundage next year.
- Introduction of a 100 per cent relief for Day Nurseries.
- Expansion of Fresh Start relief from 50 per cent to 100 per cent for the first year of new occupation and widening availability to properties that have been empty for six months instead of the previous twelve months.
- Introduction of a new relief, named 'Business Growth Accelerator', whereby a twelve month delay is introduced before rates are increased when an existing property is expanded or improved, and also before rates apply to a new build property.
- A measure to encourage speculative build, whereby new build properties will not be entered onto the valuation roll until occupied.
- Continuation of the 12.5 per cent transitional relief for offices in Aberdeen/Aberdeenshire and the hospitality industry that had been in place for 2017-18.

3.88 Further measures relating to administration of the tax system were included in the Barclay Review but have not been included in our forecast. These include the introduction of three-year revaluation cycles after 2022-23, general anti-avoidance measures, and reforms to the appeals system. The implementation of these measures could impact the Commission's forecast, but specific detail is needed on their implementation before they can be fully costed and their effect included in the forecast. The Scottish Government has committed to publishing an implementation plan for the remaining recommendations from the Barclay Review but not announced for this Draft Budget, and once this detail is available the Commission will consider these in future forecasts.

Box 3.4 Barclay Review of Non-Domestic Rates

The Barclay review group was set up in 2016 with a remit to make recommendations to Scottish Ministers that would enhance and reform the system of Non-Domestic Rates. These recommendations were required to be revenue neutral, and in August 2017 the review group published its report laying out a total of 30 recommendations to Ministers.⁶⁴

The Scottish Government responded to the report soon after its publication, accepting 22 of the 30 recommendations, announcing consultation on a further five and stating it would consider the recommendation to reduce the Large Business Supplement at future Budgets.⁶⁵ Only two of the report's recommendations were not accepted.

Three measures from the Barclay Review have been confirmed by the Government at this Draft Budget, and have been costed and included in our forecast. Additional measures relating to the administration of the tax, such as the appeals system, are in the process of being confirmed and will likely influence our forecasts at a later date. Table 3.17 sets out the recommendations of the review group that were judged to have a direct cost implication, along with their current implementation status.

Table 3.17: Summary of Barclay Review recommendations

Recommendation	Confirmed at 2018-19	Estimate Annual Cost Implication included in Barclay Report ⁶⁶
Business Growth Accelerator	Yes	–£45 million
Expansion of Fresh Start	Yes	–£2 million
Reduction in Large Business Supplement	No	–£62.5 million
New relief for Day Nurseries	Yes	–£7 million
Employ rateable value finder	No	+£1 million
General Anti-avoidance rule	No	+£21 million
All relief awards will be checked for errors	No	+£3 million
Reform charity relief	No	+£45 million
Relief restricted to properties in active occupation	No	+£7 million
Reform empty property relief	No	+£15 million
Sports relief for affordable community facilities	No	+£3 million
Commercial agricultural processing	No	+£2 million
Commercial activity on parks etc.	No	+£1.5 million

⁶⁴ See Report of the Barclay Review of Non-Domestic Rates, 22 August 2017 ([link](#))

⁶⁵ See Barclay review of non-domestic tax rates: ministerial response, 12 September 2017 ([link](#))

⁶⁶ These were illustrative costings produced as part of the Barclay Review. We have costed the policies announced at the Draft Budget 2018-19, details of these costings can be found in Annex A.

While the review group was required to ensure their recommendations were revenue neutral, only policy measures that reduce NDR income have been confirmed in this Draft Budget. Part of the largest revenue-raising proposal in Barclay – removing award of charitable relief from council-run arms-length external organisations (ALEOs) – has recently been rejected following consultation with stakeholders.⁶⁷ Other revenue-raising measures such as introduction of a General Anti-Avoidance Rule have a degree of uncertainty attached to how much they may raise, and plans for implementation are yet to be confirmed.

The measures included in the Barclay report that have been confirmed at this Draft Budget reduce our forecast of NDR income by £50 million in 2018-19.

3.89 The following policies have been costed and incorporated into the above pre-measures forecast to arrive at the Commission's final five-year forecast for NDR.

Table 3.18 Non-Domestic Rates policy measures

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Pre-measures forecast	2,810	2,908	2,956	3,028	3,208	3,423
Business Growth Accelerator	0	-42	-51	-51	-51	-51
100 per cent relief for Day Nurseries	0	-6	-6	-6	-6	-6
60 per cent relief for Hydro Schemes	0	-6	-6	-6	-6	-6
Continuation of transitional relief	0	-15				
Expansion of Fresh Start Relief	0	-2	-2	-2	-2	-2
Delaying entry onto the roll	0	-1	-1	-1	-2	-2
CPI to uprate poundage in 18-19	0	-24	-23	-23	-24	-25
Post-measures forecast	2,810	2,812	2,867	2,939	3,117	3,331

Source: Scottish Fiscal Commission

3.90 A detailed description of the methodology used to derive each of the above policy costings is available in Annex A. Once data become available from local authorities on outturn expenditure relating to these policies, we will incorporate this into future forecasts and evaluate these policy costings as part of our wider forecast evaluation.

⁶⁷ See Scottish Government news release 28 November 2017 'Sports, arts and community centres to keep rates relief' ([link](#))

Forecast uncertainty

- 3.91** There are several key uncertainties around the Commission's forecast. The largest potential impact on NDR income is the assumption relating to the amount of RV expected to be lost to appeal over the course of the five-year forecast. The Commission has taken the decision to raise the amount lost to appeal above its historic average of four per cent to five per cent, because of the concentration of RV growth experienced at the 2017 revaluation because of Designated Utilities. Sensitivity analysis showing the impact of the decision taken to raise this appeals loss assumption by one per cent is shown in the table below.

Table 3.19 Impact of revaluation losses assumption

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Historic average four per cent appeals loss	2,812	2,835	2,915	2,990	3,150	3,369
SFC five per cent appeals loss	2,810	2,812	2,867	2,939	3,117	3,331
Difference in NDR income	-2	-22	-48	-51	-33	-39

Source: Scottish Fiscal Commission

- 3.92** Given the impact the appeals assumption has on the forecast, the Commission will continue to monitor the validity of this assumption regularly. We will review data on revaluation appeals loss relating to the 2017 revaluation cycle as it becomes available, in addition to engaging with the SAA for specific market intelligence throughout the year.
- 3.93** The policy costings included in the forecast represent another source of uncertainty. While data available from the SAA and local authorities give us valuable information on both the tax base and properties currently claiming relief, there are still uncertainties regarding both the exact number of properties affected by policy changes. The behavioural response of ratepayers is also uncertain. Further information on the methodology behind the policy costings and the specific uncertainties involved in each are available in the annex to this publication. The wide-range of measures announced at this Draft Budget for NDR makes the forecast particularly sensitive to the uncertainties around policy costings.
- 3.94** A final uncertainty to the forecast relates to the administration of the tax itself. The Barclay review proposed a wide range of reforms that may impact on aspects of the Commission's forecast. For example, allowing appeals to result in RV being revised upwards may impact on the number of properties lodging revaluation appeals as well as the loss over the course of the revaluation

cycle, leading to significant impact on the forecast of NDR income. Similarly, general anti-avoidance measures proposed may also reduce the amount lost to fraud, in turn raising the amount of income collected. There is inherent uncertainty surrounding the impact of administrative reforms, and the Commission will continue to monitor the tax base to assess the effect of any changes once implemented.

Land and Buildings Transactions Tax

3.95 Land and Buildings Transactions Tax (LBTT) is payable upon purchase of a residential or non-residential property, or in the case of a purchase of an additional property. There are three components of LBTT: Residential LBTT, which is charged on the purchase of a residential property; Additional Dwelling Supplement which is charged on the purchase of an additional property; Non-Residential LBTT, which is charged on the purchase of land or non-residential properties, for example factories, offices and farms.

Table 3.20: LBTT receipts forecasts

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Residential LBTT (excluding ADS)	214	271	305	336	366	395	426
Additional Dwelling Supplement	93	93	93	98	102	106	110
Non-residential LBTT	177	193	190	194	200	206	212

Source: Scottish Fiscal Commission, Revenue Scotland 2016-17 Annual Report ([link](#)) *Accrual basis outturn net ADS ([link](#))

Residential LBTT

Forecast

Table 3.21: LBTT residential forecast (excluding ADS)

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	214	271	305	336	366	395	426

Source: Scottish Fiscal Commission

Background

3.96 Residential Land and Buildings Transaction Tax (LBTT) is paid on a residential property or land that falls above £145,000. LBTT was introduced on 1 April 2015 and replaced Stamp Duty Land Tax (SDLT) in Scotland.⁶⁸

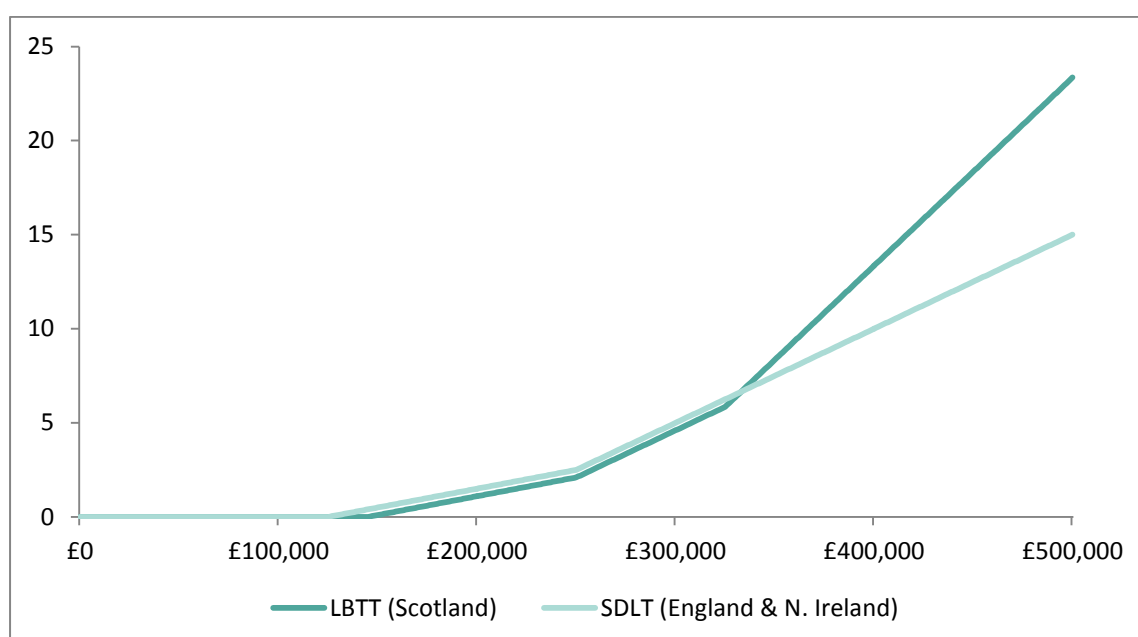
⁶⁸ For further information about Residential LBTT, please visit the Revenue Scotland website: <https://www.revenue.scot/land-buildings-transaction-tax>

3.97 Before December 2014, SDLT tax rates were applied to the entire purchase price of the home.⁶⁹ Residential LBTT tax rates are applied only to the portion of the home purchase price that falls into each tax band. For example for a £150,000 home, the first £145,000 is taxed at 0 per cent and the final £5,000 is taxed at 2 per cent.

3.98 The rates and bands for residential LBTT are:

- 0 per cent on transactions up to £145,000
- 2 per cent on the portion above £145,000 up to £250,000
- 5 per cent on the portion above £250,000 up to £325,000
- 10 per cent on the portion above £325,000 up to £750,000
- 12 per cent on the portion above £750,000

Figure 3.6: Tax paid by purchase price by country, £ thousands



Source: Revenue Scotland ([link](#)), HMRC ([link](#)), Scottish Fiscal Commission

The Scottish housing market

3.99 House price growth accelerated in the first half of 2017-18, averaging 4.3 per cent on an annual basis, up from 0.1 per cent in 2016-17. There has also been an increase in the growth rate of transactions, which averaged 5.9 per

⁶⁹ Previous Commission reports have discussed the changes to the tax system in 2014 and 2015. Scottish Fiscal Commission (2017) Forecast Evaluation Report 2017 ([link](#))

cent on an annual basis in the first half of 2017-18, up from 0.6 per cent in 2016-17.⁷⁰

3.100 The first half of 2017-18 has also seen an increase in the proportion of transactions that fall into the top two tax brackets, averaging nine per cent in the first half of 2017-18, up from eight per cent in 2016-17.⁷¹ As a result, residential LBTT revenues in the first half of 2017-18 have been £31 million than in the first half of the previous financial year.

Modelling approach

3.101 The Residential LBTT forecasts use mean and median house price and transactions forecasts to calculate a distribution of residential transactions in the Scottish housing market. Revenues are calculated from the forecasts of the average tax payable in each band and the total number of transactions falling into each band. The Office for Budget Responsibility (OBR) developed a similar method for its November 2017 forecast, aligning its approach more closely to that used by the SFC.⁷² The Commission's forecasts include an explicit calculation of the behavioural response to fiscal drag, which occurs as house prices rise thus increasing the tax payable.

Forecast

3.102 The Commission's forecast of residential LBTT is shown in Table 3.22 below, along with how the forecast has developed since the forecast from December 2016. Overall, the forecasts are a significant upward revision to the Scottish Government forecasts produced in December 2016.

⁷⁰ Registers of Scotland. Quarterly house price statistics. ([link](#))

⁷¹ Revenue Scotland monthly statistics ([link](#))

⁷² For more information, please refer to OBR (November 2017) Devolved Taxes Forecast ([link](#)) and Scossich Fiscal Commission (September 2017) Forecast Evaluation Report ([link](#)) and Current Approach to Forecasting September 2017 ([link](#))

Table 3.22: Residential LBTT receipts forecasts (excluding ADS)

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG December 2016	181	211	235	251	265	280	-
House prices (mean)	14	80	97	116	139	162	-
Transactions	6	21	23	25	29	32	-
House prices (median)	24	-37	-44	-49	-57	-68	-
Adjustment factors	-6	-2	-2	-2	-2	-2	-
Fiscal drag	-	0	-1	-1	-3	-4	-
Other	-5	-2	1	4	1	2	-
SFC Dec 2017 pre-measures	214	271	310	343	372	402	433
Dec 2017 policy measures	-	-	-5	-6	-7	-7	-7
SFC Dec 2017 post-measures	214	271	305	336	366	395	426

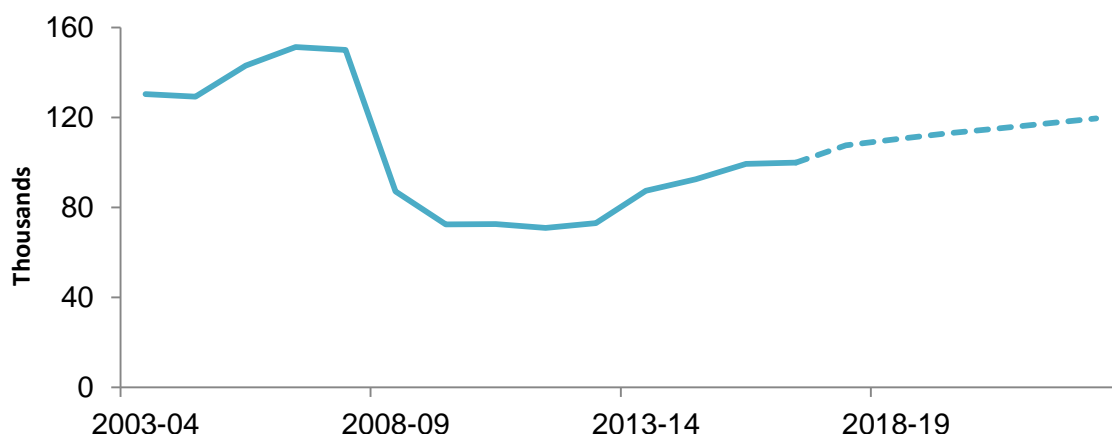
Source: Scottish Fiscal Commission, Scottish Government Draft Budget 2017-18 Devolved Taxes Methodology ([link](#)): 2016-17 is a comparison of Scottish Government forecasts with full year data on revenue raised, using analysis carried out in our Forecast Evaluation Report 2017 ([link](#))

3.103 The largest change results from higher average house prices over the forecast horizon. This is because of two developments since December 2016. First, house price growth in 2017 has been stronger than expected. At the time, house prices were expected to increase by 1.8 per cent in 2017-18. House price growth has thus far averaged 4.3 per cent in the first half of the financial year and the Commission expects that this growth will continue into the second half of the year.

3.104 Second, the Commission's forecasts for house prices are based on statistics from Revenue Scotland rather than figures from Registers of Scotland. Revenue Scotland's average house price calculation includes properties sold for prices of over £1 million, whereas Registers of Scotland excludes those properties. Given the progressive structure of the tax and the fact that the top bracket contributes 17 per cent of total revenue, it is important to capture these in our forecast. Using Revenue Scotland data on prices ensures the data used in the forecast accurately reflects the actual tax base. This leads to a higher average house price, and higher forecasts of receipts, across the whole forecast horizon.

3.105 There is an upward revision to the forecast for transactions, which is largely attributable to growth during the first half of 2017-18 and the Commission's expectation that this will continue into the second half of the year. We expect that transactions will continue to grow from 2018-19 onwards, albeit at a considerably slower pace than in 2017-18. The volume of transactions, while increasing, will remain below pre-crisis levels even by the end of the forecast horizon. The effect is to raise the revenue forecast by £32 million by 2021-22.

Figure 3.7: Residential transactions in Scotland by financial year, thousands



Source: Registers of Scotland ([link](#))

Note. Registers of Scotland transaction statistics cover properties between £20,000 and £1,000,000

3.106 There is a downward contribution from a higher median price forecast by the Commission. The impact on revenue occurs because by holding average prices constant and raising the median price, the forecast distribution will contain proportionately fewer high value transactions at any given mean price.

3.107 Following previous Commission recommendations on fiscal drag we have adjusted the forecast to account for the behavioural response to fiscal drag in the Commission's forecast.⁷³ Fiscal drag occurs when the tax paid on a transaction increases as a result of growth in prices pushing the transaction up the tax schedule.

3.108 Our methodology to estimate the behavioural response to fiscal drag is consistent with that of the OBR. We use the same behavioural elasticities to assess the response of future prices paid. The impact of including fiscal drag in the forecast is modest, with a maximum impact of £6 million in 2022-23. The effect will be greater when average prices are rising at a faster rate. Should our price forecasts increase in the future then the behavioural response to fiscal drag would be expected to increase.

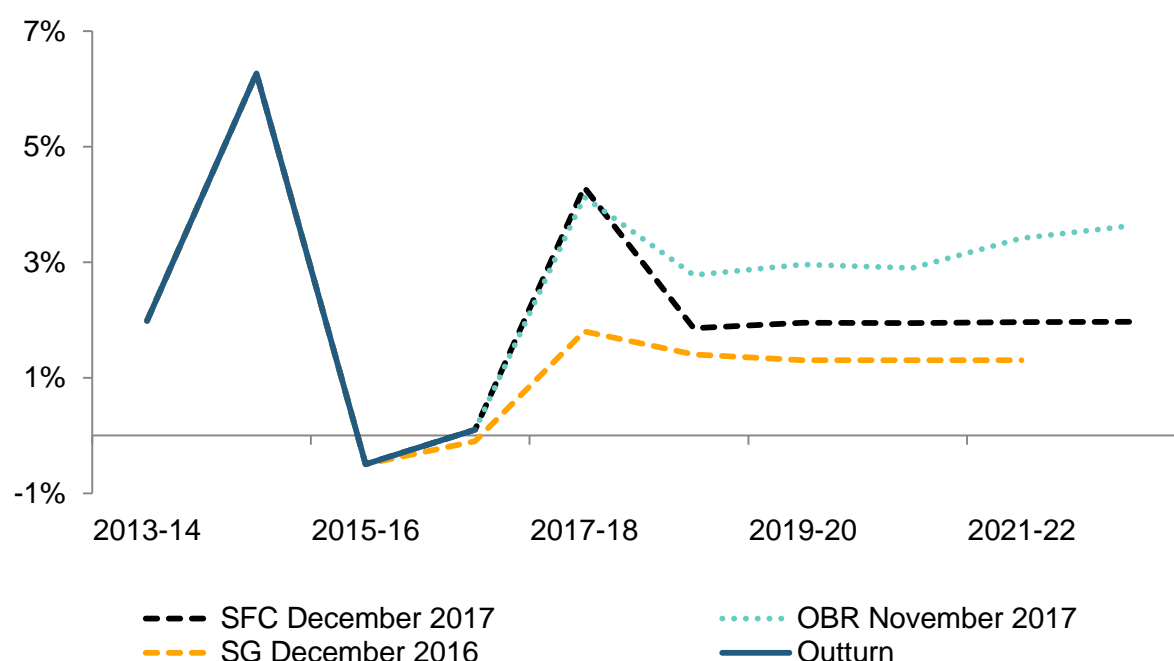
⁷³ See Scottish Fiscal Commission (2015) Report on Draft Budget 2016-17 ([link](#)) and Scottish Fiscal Commission (2016) Report on Draft Budget 2017-18 ([link](#))

3.109 The Scottish Government has introduced a relief for First Time Buyers, which raises their zero tax threshold from £145,000 to £175,000. This leads to an average reduction in LBTT revenues of £6 million per year over the forecast horizon. See paragraph 3.112 and Annex A for further details.

Forecast uncertainty

3.110 The Commission's residential LBTT forecasts are sensitive to variations in any of the key determinants: mean prices, median prices and transactions. The major area of forecast uncertainty is the forecast for house price growth. As outlined in the Commission's 2017 Forecast Evaluation Report this was the largest source of forecast error for revenue in the Scottish Government's December 2015 and 2016 forecasts.⁷⁴ It is also the largest source of difference between the December 2016 and our latest forecasts. Figure 3.8 shows these price forecasts.

Figure 3.8: House price growth forecasts (per cent)



Source: Scottish Fiscal Commission, OBR (2017) Devolved Taxes Forecast ([link](#)) Scottish Government Draft Budget 2017-18 Devolved Taxes Methodology ([link](#))

3.111 Residential LBTT is a progressive tax, so small changes in the forecast for house price growth can lead to large changes in the forecast for LBTT

⁷⁴ Scottish Fiscal Commission (2017) Forecast Evaluation Report 2017 ([link](#))

revenues. As an illustration, using the OBR November 2017 house price growth forecasts rather than our latest forecasts results in an increase of £20 million in forecast revenues in 2022-23. Using the Scottish Government's December 2016 price growth forecasts from 2017-18 onwards results in a decrease of £64 million in 2022-23.

Table 3.23: Sensitivity analysis of Commission revenue forecasts to alternative house price growth forecasts

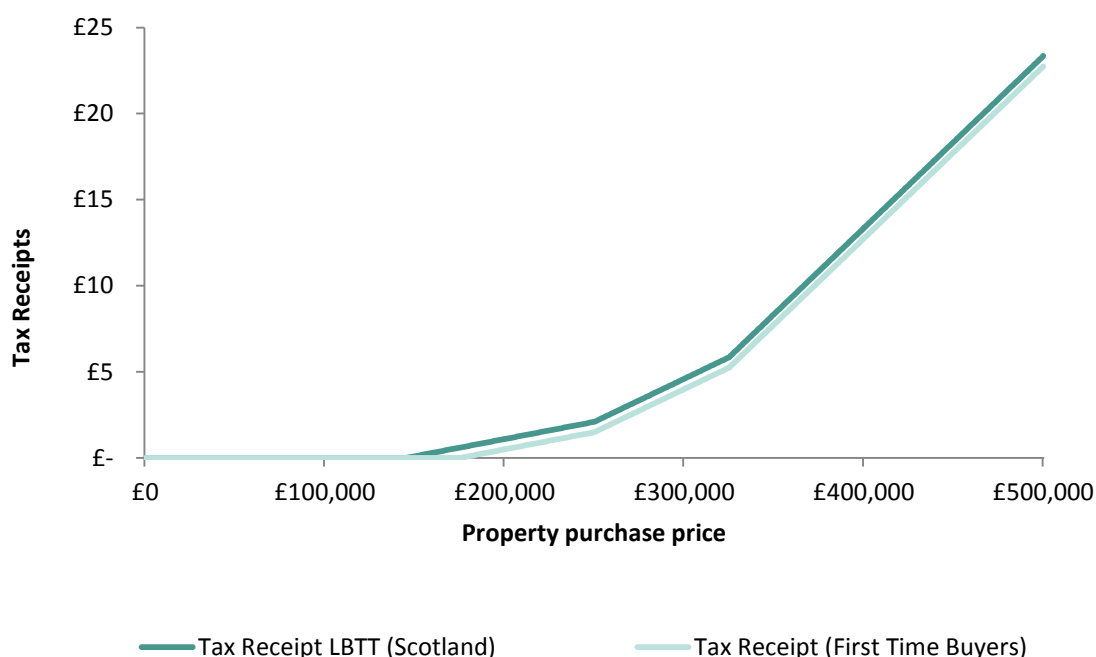
£ million	2016-17 outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017*	214	271	310	343	372	402	433
Using OBR house price growth (November 2017)	214	274	316	352	382	418	452
Using SG house price growth (December 2016)	214	255	286	309	330	350	370

Source: Scottish Fiscal Commission, OBR (2017) Devolved Taxes Forecast ([link](#)) Scottish Government (2016) Draft Budget 2017-18 Devolved Taxes Methodology ([link](#)) *Analysis conducted using pre-measures forecast

Scottish Government policy

- 3.112** The Scottish Government announced a relief for First Time Buyers (FTBs), expected to apply from 1 June 2018. This raises the zero-tax threshold for FTBs from £145,000 to £175,000. The average reduction in tax due for FTBs buying a house within the £145,000 to £175,000 price range is £290. FTBs buying above £175,000 will see a £600 reduction.
- 3.113** The relief is estimated to affect around 12,000 FTBs and lead to between 150 and 200 additional FTB transactions per year. These transactions will displace other transactions that would have taken place within the same price range (for example home movers and buy-to-let landlords).
- 3.114** We estimate the policy will raise FTB purchase prices by up to 0.5 per cent relative to the level in the absence of the policy. This comes as a result of buyers' and sellers' reactions to the increased money available for house purchase as a result of lower tax paid. The overall effect on the market is small as FTBs benefiting from the reduction in tax account for only 10 per cent of the residential market. The market average house price is expected to increase by 0.05 per cent each year.

Figure 3.9: Tax paid by purchase price of property (£ thousands)



Source: Revenue Scotland ([link](#)), Scottish Fiscal Commission

3.115 The policy reduces residential LBTT revenue raised by on average £6 million per year in our forecast. The impact on ADS revenues is on average a £0.3 million reduction in revenue each year. Further detail on the policy costing can be found in Annex A.

3.116 The UK Government announced an additional £10 billion of funding for the Help to Buy shared equity loan scheme at the Autumn Budget 2017. Current Scottish Government policy is that the Help to Buy (Scotland) Affordable New Build scheme will continue to run as planned until March 2019. There is no change planned at this stage. Our forecast is unaltered as a result.

UK Government Policy

3.117 The UK Government announced a change to Stamp Duty Land Tax (SDLT) as part of its Autumn Budget. First time buyers are exempt from paying stamp duty for any purchase up to £300,000. For purchases between £300,000 and £500,000, the stamp duty rate of 5 per cent is applied to the portion of the purchase price above £300,000. For prices above £500,000, the normal SDLT tax schedule applies to the full value of the property. The policy applied with immediate effect.

3.118 There is no impact on the LBTT forecast as a result of this policy change. This is consistent with research suggesting that the impact of SDLT is on local

home moving, with no measurable impact on long distance mobility.⁷⁵ The Commission's judgement is also consistent with the OBR's assessment of the impact. We note that in its forecasts for LBTT, the OBR explicitly strips out the estimated effect of the policy change from its UK house price growth forecasts.

Comparison with OBR forecasts

3.119 The Commission's forecasts are slightly higher than those made by the OBR.

3.120 The principal areas of difference in forecasting approach are:

- the OBR's use of UK prices and transactions growth rates (excluding the effect of the FTB relief on prices in the rest of the UK)
- different modelling approaches and judgements for house prices and transactions
- the OBR's use of 2015 as the base year for its forecast as opposed to the Commission's starting point of 2017
- the OBR do not account for the new SG policy on FTB

⁷⁵ Hilber & Lyytikäinen (2017), Transfer taxes and household mobility: distortion on the housing or labor market?, Journal of Urban Economics, Vol. 101 ([link](#))

Table 3.24: Commission and OBR Residential LBTT forecasts (excluding ADS)

£ million	2016-17 outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
OBR November 2017	214	276	299	326	354	388	427
SFC Dec 2017 post measures	214	271	305	336	366	395	426
Difference	-	-5	6	10	12	7	-1

Source: Scottish Fiscal Commission, OBR (2017) Devolved Taxes Forecast ([link](#))

3.121 Table 3.24 shows that the Commission's forecast for 2018-19 is £6 million higher than that of the OBR. The main reason for this difference is the net effect of much higher OBR forecast average prices, but much lower forecast transactions. By 2022-23, average house prices are 14 per cent higher and transactions 8 per cent lower than in the Commission's forecasts. This drives a large upward difference in revenues from higher house prices, but a downward adjustment because of transactions. These two effects broadly cancel out and the forecast receipts are relatively similar over the forecast horizon. There is also a difference as the OBR forecast was produced before the Scottish Government announced the relief for first time buyers in Scotland.

Additional Dwelling Supplement

Table 3.25: Forecasts for Additional Dwelling Supplement revenue raised

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	93	93	93	98	102	106	110

Source: Scottish Fiscal Commission, *Accrual basis outturn net ADS ([link](#))

Background

3.122 The Additional Dwelling Supplement (ADS) was introduced on 1 April 2016 and applies to additional residential property purchases worth £40,000 or more. The rate is set at 3 per cent on the full value of the property purchase.

3.123 ADS can be reclaimed if the purchaser sells their previous main residence within 18 months of their purchase of the new property. The Commission forecasts net revenue – total ADS received less ADS repayments. The accounting convention used in the Scottish Government's December 2016 forecast accrued all refunds back to the date of the original transaction. In

contrast the Commission's forecast accounts for ADS payments when the original transaction takes place and repayments when the sale of the main residence occurs.

- 3.124 The change in the accounting convention ensures the Commission's forecasts are better aligned with Revenue Scotland's annual report and accounts for the devolved taxes and will make evaluation of the forecasts easier. The largest impact of this change is on the in-year forecast for 2017-18.

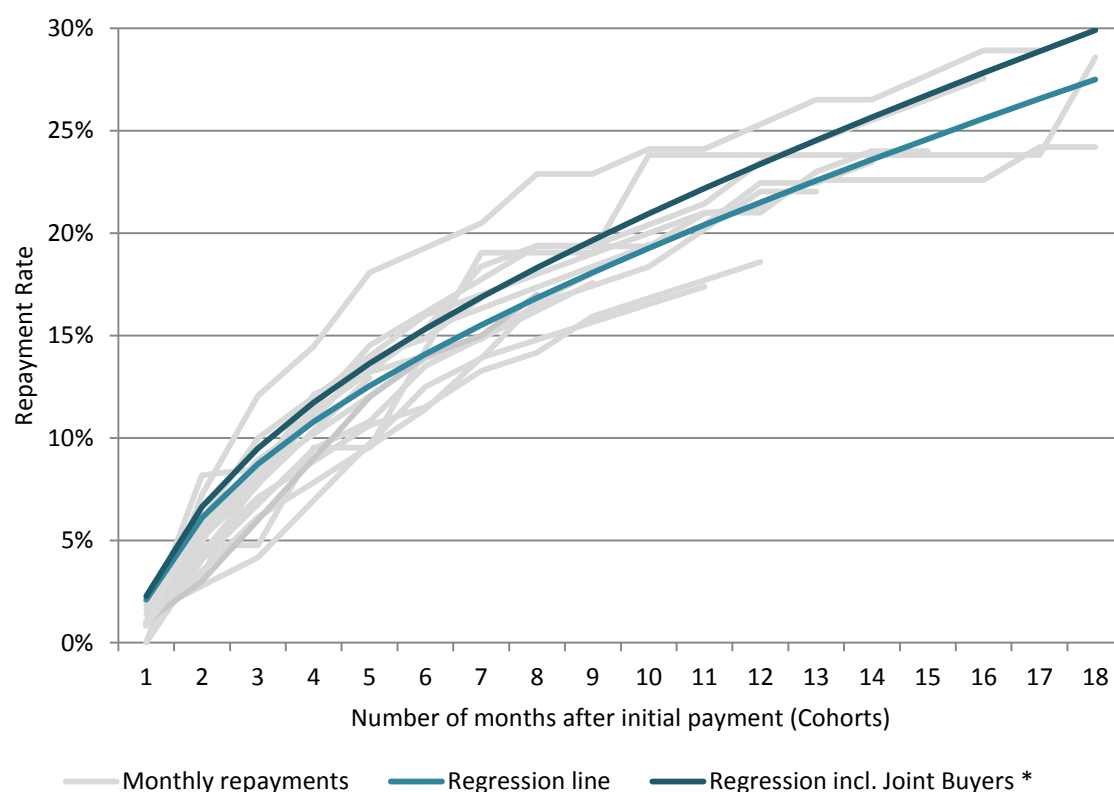
Modelling approach

- 3.125 The ADS model uses the forecasts for average house prices and transactions generated by the residential LBTT model.
- 3.126 Since the introduction of ADS in April 2016, around 22 per cent of all residential transactions have been liable for ADS. Gross revenues are calculated based on the assumption that the share of transactions liable for ADS remains constant across the forecast horizon and that prices are the same as the main market.⁷⁶
- 3.127 Net revenue is calculated by adjusting gross revenue to account for refunds paid in each quarter. The net revenue in any given quarter therefore depends on the gross revenue in that quarter and the refunds paid out from additional property transactions from the current and previous five quarters. The Commission uses a statistical model (depicted in Figure 3.10 below) to estimate the proportion of the gross ADS revenues that will be refunded in future quarters. The final repayment rate includes an upward adjustment to reflect the changes to ADS refund eligibility for joint buyers which applied from 30 June 2017.⁷⁷

⁷⁶ Prices of properties paying the ADS are, on average, the same as those in the main residential market. The prices of properties which pay ADS and do not claim a refund are on average lower than those in the main residential market. In the Commission's forecast, the difference in price is accounted for through the refunds of ADS.

⁷⁷ Revenue Scotland Guidance on Amendments to returns/repayment claims for the ADS ([link](#)). Previously, if spouses, civil partners or co-habitants were jointly buying a home to replace a home that was owned by only one of them, the additional amount was chargeable and non-refundable.

Figure 3.10: Estimate of the ADS repayment rate (per cent)



Source: Revenue Scotland ([link](#)), Scottish Fiscal Commission

*Regression incl. Joint Buyers includes an upward adjustment for policy change for joint buyer repayment claims

Source: Revenue Scotland, Scottish Fiscal Commission

Forecast

3.128 The Commission's forecast of net Additional Dwelling Supplement is shown in Table 3.26, along with how the forecast has developed since the December 2016 forecast. Overall, the Commission's December 2017 forecasts entail an upward revision to the previous forecasts.

Table 3.26: SFC and Scottish Government ADS forecasts

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG December 2016	71	72	75	78	80	82	-
House prices	-	5	5	5	6	7	-
Transactions	-	9	9	9	10	11	-
Model developments	-	8	6	7	7	7	-
Joint buyers	-	0	-1	0	0	0	-
Behavioural response to fiscal drag	-	0	0	0	0	-1	-
Other	-	-2	-1	-1	-1	-1	-
SFC Dec 2017 Pre-Measures	93	93	94	98	102	106	110
Dec 2017 Policy Measures	-	-	0	0	0	0	0
SFC Dec 2017 Post-Measures	93	93	93	98	102	106	110

Source: Scottish Fiscal Commission, Scottish Government (2016) Draft Budget 2017-18 Devolved Taxes Methodology ([link](#))

*Accrual basis outturn net ADS ([link](#))

3.129 The main upward revisions to the forecast come from the higher forecasts of prices and transactions for the residential market as a whole. Higher transactions add an average of £10 million to revenues each year, while higher prices add an average £6 million. There is an upward revision from model developments, because of a lower repayment rate than previously assumed and the move to the new accounting basis. This adds £6 million to our 2018-19 in-year forecast relative to the Scottish Government's December 2016 forecast. A small behavioural response to fiscal drag and an adjustment to account for the retrospective application of the Land and Buildings Transaction Tax (Relief from Additional Amount) (Scotland) Bill are included in the forecast.⁷⁸ These collectively lower revenue by £1 million in 2018-19 and 2022-23.

Forecast uncertainty

3.130 As with the residential receipts forecast, the main sensitivities are to the forecasts of house prices and transactions. The ADS forecast is also dependent on the estimate of the proportion of revenue that will be reclaimed. As an illustration, the Scottish Government's December 2016 ADS forecast was based on additional property buyers' stated intention to reclaim ADS. At

⁷⁸ The Land and Buildings Transaction Tax (Relief from Additional Amount) (Scotland) Bill allows couples who jointly purchased a property as a main residence to replace a main residence previously owned by one partner prior to 30 June 2017 to reclaim the ADS paid ([link](#))

the time this was 34 per cent of total revenues.⁷⁹ Applying this repayment assumption to our current gross ADS forecast, lowers net ADS revenues raised by £6 million by 2022-23.

Table 3.27 - Sensitivity analysis of Commission forecasts to alternative ADS repayment assumptions (Analysis conducted using pre-measures forecast)

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017	93	93	94	98	102	106	110
Using SG repayments assumption (December 2015)	93	90	89	93	96	100	103
Difference	-	-3	-5	-6	-6	-6	-6

Source: Scottish Fiscal Commission, Scottish Government (2016) Draft Budget 2017-18 Devolved Taxes Methodology ([link](#))

*Accrual basis outturn net ADS ([link](#))

Scottish Government policy

3.131 The Scottish Government announced a change to the rules about reclaiming ADS for couples purchasing a main residence where the previous property was only owned by one member of the couple. The change applied from 30 June 2017. Initial indications from Revenue Scotland suggest that it has increased the transactions intention to reclaim by 1.8 percentage points. We have adjusted our projected repayment rate accordingly.

3.132 We also make a small change to the forecast refunds for 2018-19 to account for the Scottish Government's Bill which provides for those who purchased properties prior to the 30 June 2017 to reclaim ADS payments made under these circumstances.⁸⁰ This adjustment lowers the 2018-19 forecast by £1 million.

UK Government policy

3.133 The UK Government introduced changes to mortgage interest relief (MIR) for buy-to-let landlords in its 2015 Budget. These changes are being phased in between April 2017 and April 2020. In 2017-18, landlords will be able to offset 75 per cent of their mortgage interest payments from their rental income

⁷⁹ We note here that the Scottish Government's assumption was about the proportion of transactions rather than revenues, which was 25 per cent. We use the equivalent revenue figure in order to maintain consistency with our forecast method.

⁸⁰ Land and Buildings Transaction Tax (Relief from Additional Amount) (Scotland) Bill ([link](#))

before being taxed, rather than 100 per cent as under the old rules. The remaining 25 per cent can be deducted from their income at the 20 per cent basic income tax rate. By 2020, landlords will no longer be able to deduct any mortgage interest payments from their taxable profits. All landlords will pay tax on the full amount less tax relief. The amount of tax relief that landlords can claim will be limited to 20 per cent, rather than 40 per cent or 45 per cent, which was previously claimed by those with higher gross incomes.

3.134 Our forecast assumes that landlords are already aware of these changes and that there are no additional market level reactions over and above those captured in existing market trends and the Commission's forecast. We will continue to monitor developments in the buy-to-let market and review this assumption in future forecast rounds.

Comparison with OBR forecasts

3.135 Table 3.28 below shows that the OBR net revenue forecasts are higher than those made by the Commission. This is primarily driven by the OBR's higher forecasts of house price growth. There is a difference in the assumed repayments rate, with the Commission's set higher as a result of different modelling assumptions and the Commission's upward adjustment to reflect the impact of the November 2017 ADS repayment eligibility changes for joint buyers. There is also a difference because of the timing of the OBR forecast, as this was before the Scottish Government announced the relief for first time buyers in Scotland.

Table 3.28: SFC and OBR forecasts for net ADS revenues

£ million	2016-17 Outturn*	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
OBR November 2017	90	99	102	107	112	118	125
SFC December 2017	93	93	93	98	102	106	110
Post- measures							
Difference	3	-6	-9	-9	-10	-12	-15

Source: Scottish Fiscal Commission, OBR (November 2017) Devolved Taxes Forecast ([link](#)). *Accrual basis outturn net ADS ([link](#))

Non-residential LBTT

Table 3.29: SFC forecasts for non-residential revenues

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	177	193	190	194	200	206	212

Source: Scottish Fiscal Commission

3.136 Non-residential LBTT applies to commercial properties such as shops or offices, agricultural land, forest or any other transaction where the main subject matter of transaction consists or includes an interest on the land that is non-residential. Similar to residential LBTT, tax rates apply to the portion of the purchase price falling into the tax band.

3.137 The relevant rates and bands for non-residential LBTT are:

- 0 per cent on transactions up to £150,000;
- 3 per cent on the portion above £150,000 up to £350,000;
- 4.5 per cent on the portion above £350,000;

3.138 Lease transactions, which make up 12 per cent of non-residential tax revenues, are taxed based on the net present value (NPV) of future rental payments and account for around 10 per cent of total non-residential revenues.

3.139 The relevant rates and bands for non-residential LBTT leases are:

- 0 per cent on transactions NPV up to £150,000;
- 1 per cent on the NPV portion above £150,000;

3.140 LBTT may also be payable on chargeable consideration other than rent, such as a premium. The standard tax rates and bands for non-residential property transactions apply to any such payments under a lease.

Modelling approach

3.141 An in-year forecast for 2017-18 revenues is constructed by estimating receipts in the second half of the financial year, based on the proportion of revenues that has historically fallen into this period. A base year forecast is constructed based on a weighted average of the in-year forecast and the previous two years of revenues. The previous revenues are adjusted to reflect median price

growth in the years to 2017-18. Using this method controls for the volatility of non-residential revenues from year-to-year.

3.142 Once the base year forecast has been calculated, we use the latest OBR forecasts of commercial property price and transactions growth to produce the five-year forecast.⁸¹ This means that any forecast differences between the Commission and the OBR will be because of differences in the way each institution estimates the base year figure.

Table 3.30: SFC and OBR forecasts for non-residential revenues

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
OBR November 2017	177	179	180	183	190	195	196
SFC December 2017	177	193	190	194	200	206	212
Difference	-	14	10	11	10	11	16

Source: Scottish Fiscal Commission, OBR Devolved Taxes Forecast November 2017 ([link](#))

Forecast

3.143 The difference between the December 2016 forecast and the latest forecasts results from using revised price and transaction growth forecasts and a new base year estimate.

Table 3.31: Non-residential LBTT receipts forecasts

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG December 2016	228	224	233	242	252	262	-
Prices	-47	0	-8	-9	-10	-11	-
Transactions	-6	0	-1	-3	-5	-6	-
Base year	-2	-35	-35	-35	-35	-35	-
Other	3	5	1	0	0	-2	-
CGT for non-UK residents	-	0	0	-1	-1	-2	-
SFC December 2017	177	193	190	194	200	206	212

Source: Scottish Fiscal Commission, Scottish Government (2016) Draft Budget 2017-18 Devolved Taxes Methodology ([link](#)), OBR Devolved Taxes Forecast November 2017 ([link](#))

Note: 2016-17 is a comparison of Scottish Government forecasts with full year data on revenue raised, using analysis carried out in our Forecast Evaluation Report 2017 ([link](#)). Numbers may not sum to totals due to rounding.

3.144 The main change since the Scottish Government's December 2016 forecast is from a £35 million reduction in revenues each year because of the change in the base year forecast. There is also some contribution from weaker forecasts

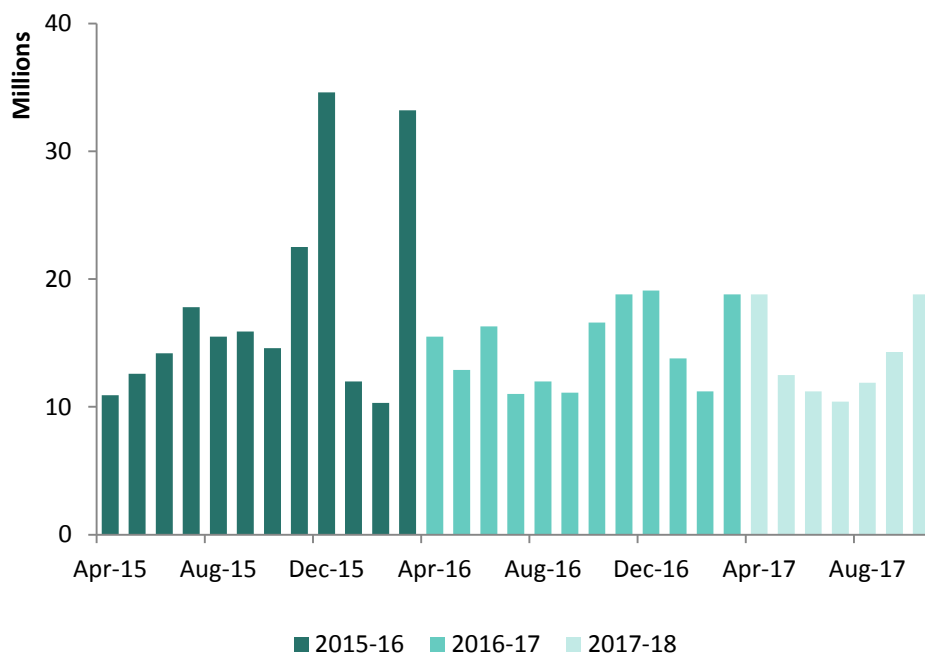
⁸¹ Forecasts are taken from Table 4.1 in OBR (2017) Economic and Fiscal Outlook – November 2017 ([link](#))

for prices and transactions.

Forecast uncertainty

3.145 The major uncertainty in forecasting non-residential LBTT revenues is the influence of a very small number of high value transactions. The top tax band for purchases accounted for 16 per cent of all transactions but 85 per cent of total non-residential LBTT raised in 2016-17. The chart below highlights the contrast between receipts in 2015-16 and 2016-17, which is entirely because of the absence in the latter year of very high value transactions coinciding with corporate financial year ends in December and March.

Figure 3.11: Non-residential LBTT receipts - £m



Source: Revenue Scotland ([link](#))

UK Government policy

3.146 The UK Government announced a change to the capital gains tax (CGT) regime for UK non-residents selling commercial and residential property. As of April 2019, non-UK resident sellers of property, which includes individuals, trusts and companies, will be liable for CGT. In line with the OBR, we assume that the main impact is on non-residential property and leads to a small decrease in non-residential LBTT revenues as of 2019-20.

Air Passenger Duty

Table 3.32: Forecast of Scottish APD

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	264	292	306	314	324	336	348

Source: Scottish Fiscal Commission

3.147 Air Departure Tax (ADT) was due to replace UK Air Passenger Duty (APD) in Scotland from April 2018. The introduction of ADT in Scotland has been deferred until the issue raised in relation to the Highlands and Islands exemption have been resolved.⁸² We have therefore forecast APD paid in Scotland.

3.148 APD is a tax paid on passengers departing from UK airports. Passengers departing the Highlands and Islands airports are exempt.⁸³ The amount of tax paid depends on the passenger's class of travel and their final destination. Under APD, destinations fall into two bands based on flight distance from London. The higher band applies to countries whose capital city is further than 2,000 miles from London. As APD applies to the final destination, connecting flights are exempt. There are a number of other exemptions to APD, such as passengers under the age of 16 travelling in the lowest class.

3.149 The class of travel determines the rate of APD paid. The reduced rate applies where passengers are travelling in the lowest class available. The standard rate applies to passengers travelling in any other class of travel and the premium rate applies to private jets.

Forecast of Scottish APD

3.150 APD tax forms are returned on a company-by-company basis. There are therefore no historic data on APD receipts or passengers paying APD in Scotland. The Civil Aviation Authority (CAA) airport data provide total passenger numbers for all Scottish airports on a monthly basis from January 1997 onwards.⁸⁴

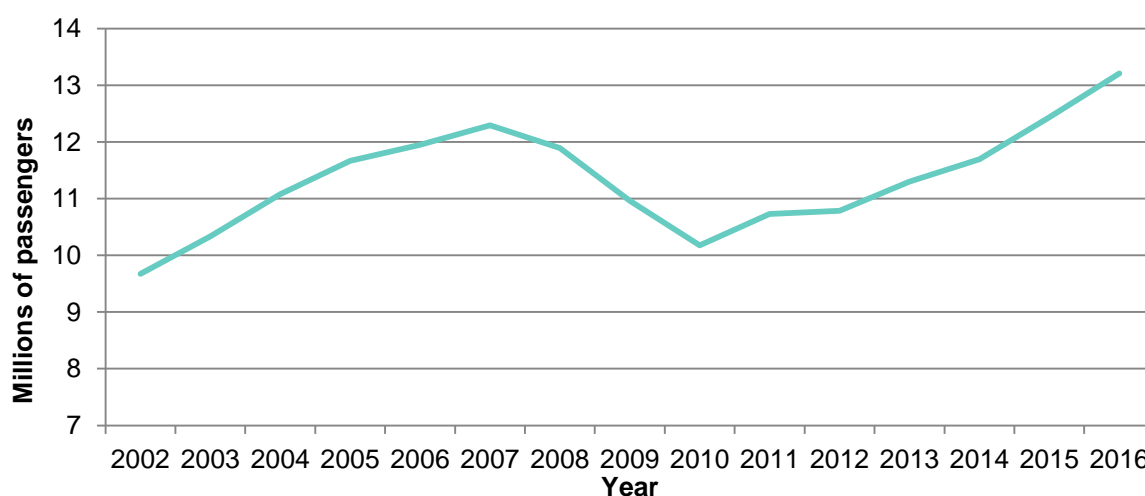
3.151 Figure 3.12 shows total passenger numbers departing all Scottish airports, including the Highlands & Islands airports. With the exception of the financial crisis 2008 to 2010, the number of passengers departing from Scottish airports has increased over the past 19 years.

⁸² Derek Mackay (2017) Air Departure Tax: Update to the Finance and Constitution committee ([link](#))

⁸³ HMRC (2017) Excise Notice 550: Air Passenger Duty ([link](#))

⁸⁴ Civil Aviation Authority (2017) UK Airport Data ([link](#))

Figure 3.12: Passengers departing Scottish airports by year, millions



Source: CAA Airport Data, covers all Scottish airports.

3.152 This represents all passengers travelling and not all passengers paying APD. It also does not provide information on the band or class of travel. The CAA departing passenger survey is used to estimate the number of passengers exempt from the tax and to calculate the tax paid by the remaining passengers. The survey runs every year interviewing passengers departing certain UK airports. The survey covered Scottish airports in 2005, 2009, 2013 and 2015-16. The next survey of Scottish airports is due in 2018.

3.153 It is expected that the proportion of passengers travelling in the different bands will not vary significantly from the last survey. The percentage of passengers travelling in the different bands has stayed constant at the UK level. HMRC statistics show the percentage of passengers travelling in Band A stayed constant between 2003-04 and 2016-17 at 80 per cent.⁸⁵ At a Scottish level, the proportion of passengers travelling in the different bands may be more volatile as new routes are opened and closed.

3.154 Our approach is consistent with the methodology used by the Scottish Government in Government Expenditure and Revenue Scotland (GERS) to estimate the Scottish share of APD.⁸⁶

3.155 Table 3.33 below shows historic estimates of the Scottish share of APD. Over the last two financial years, the share has increased from 7.6 per cent of UK receipts in 2014-15 to 8.3 per cent in 2016-17. This is explained by:

- **Tax changes in 2015-16:** In April 2015, the number of APD bands was reduced from four to two. Previously bands C and D had

⁸⁵ HMRC (2017), Air Passenger Duty Bulletin ([link](#))

⁸⁶ Scottish Government (2017) Government Expenditure & Revenue Scotland 2016-17 ([link](#))

charged a higher rate of APD for journeys greater than 4,000 miles and 6,000 miles from London. As the CAA survey showed Scotland has relatively fewer passengers travelling long haul than the rest of the UK, eliminating bands C and D increased the Scottish share of APD.

- **Edinburgh long haul travel:** The 2015-16 CAA Survey showed an increase in the proportion of passengers departing from Edinburgh travelling in Band B (over 2,000 miles from London), relative to the rest of the UK. This contributes to the increase in the Scottish share of APD.

Table 3.33: Scottish share of APD

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Scottish APD (£ million)	197	213	225	243	247	264
Share of UK receipts (%)	7.6	7.6	7.5	7.6	8.0	8.3

Source: Government Expenditure & Revenue Scotland 2016-17 ([link](#)); Scottish Fiscal Commission

Methodology

3.156 Scottish APD revenue forecasts are based on the relationship between total passenger numbers departing the major Scottish airports and UK GDP.⁸⁷ Our model uses the OBR forecast of percentage growth in UK GDP to estimate the percentage growth in passenger numbers.⁸⁸ We estimate a 1 per cent increase in UK GDP increases Scottish passengers by 1.5 per cent.

3.157 The forecast of total passenger numbers is then allocated into bands and class of travel using the CAA departing passenger survey.⁸⁹ This is then multiplied by the appropriate tax rate to produce a forecast for Scottish APD.⁹⁰

3.158 The historic data and statistical evaluations suggest UK GDP explains movements in Scottish passenger numbers better than Scottish GDP. A reason for UK GDP performing better could be that a significant proportion of ADT taxpayers will not be resident in Scotland. Analysis on the 2013 CAA survey shows that approximately 40 per cent of passengers departing Scottish

⁸⁷ The airports covered are Aberdeen, Edinburgh Glasgow and Prestwick. Dundee is not included, as it does not currently run any APD liable routes.

⁸⁸ Real (inflation adjusted) GDP

⁸⁹ The CAA Surveys used are the 2009, 2013 and 2015-16 surveys, Prestwick is only surveyed in 2009 and 2015-16 survey only covers Edinburgh and Glasgow.

⁹⁰ For further information, see Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

airports are not resident in Scotland. This means that their decision to fly would be largely unaffected by Scottish economic conditions and could depend on UK-wide economic conditions to a greater extent.

3.159 The past four years have seen strong growth in Scottish passenger numbers at a time when Scottish GDP growth has been relatively low. This could explain why UK GDP appears to be better correlated with Scottish passenger growth. In the future, we will continue to monitor the appropriateness of this approach and explore whether the relationship between passenger numbers and Scottish/UK GDP growth is changing over time.

UK Government policy

3.160 The UK Government announced at Autumn Budget 2017, a freeze in the Band B reduced rate and increase in the Band B standard rate in 2019-20.⁹¹

3.161 We estimate this policy will reduce Scottish APD revenues by £2 million per year after adjusting for behaviour.⁹² At the UK level, HMRC estimated it would raise around £25 million per year.⁹³ A lower proportion of passengers travelling in Band B standard class in Scotland than the UK explains this difference. Table 3.34 shows these estimated proportions for 2016-17.

Table 3.34: Percentage of Band B passengers, 2016-17

	Percentage of Band B passengers travelling in:		Percentage of total passengers travelling in Band B
	Reduced (Economy)	Standard (Business)	
Scotland	94	6	13
UK	79	21	20

Source: HMRC Tax & Duty Bulletins-Air Passenger Duty, October 2017 ([link](#)), Scottish Fiscal Commission based on the CAA Passenger Survey.

3.162 Table 3.35 shows the forecast of Scottish APD. It is assumed to grow from £264 million in 2016-17 to £348 million in 2022-23.

⁹¹ HM Treasury (2017) Autumn Budget 2017: policy costings ([link](#))

⁹² In order to model behaviour we estimated ticket prices using the CAA Passenger Survey and the elasticities were based on the Department for Transport ([link](#)). We estimate an increase in passenger numbers of 3,000 per year.

⁹³ OBR (2017) Devolved Taxes Forecast Autumn Budget 2017 ([link](#))

Table 3.35: Forecast of Scottish APD

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Baseline Scottish APD	264	292	306	316	326	338	350
UK government policy	0	0	0	-2	-2	-2	-2
SFC December 2017	264	292	306	314	324	336	348

Source: Scottish Fiscal Commission

Uncertainties

- 3.163** There are a number of uncertainties around the forecast of Scottish APD. One of the major uncertainties is the lack of historic data on APD receipts in Scotland. The estimate is based on a combination of administrative and survey data. The Commission has undertaken a significant programme of work to explore available data and determine the most appropriate method for estimating Scottish APD. The accuracy of the estimate will only be known once the tax is devolved and separately collected for Scotland.
- 3.164** Another uncertainty is the use of UK GDP to forecast Scottish passenger numbers. If the effect of GDP growth on passenger numbers is different in future years compared the historical data, this will affect the accuracy of the forecast. Secondly, any difference between the OBR's GDP forecast and outturn GDP could lead to an error in the forecast.
- 3.165** The forecast assumes the proportion of passengers travelling in the different bands and classes of travel stays constant over the forecast period. If this proportion were to change over the forecast horizon, this could lead to a difference between the forecast and receipts.
- 3.166** Finally, the Scottish Government has committed to cutting the overall burden of APD by 50 per cent.⁹⁴ The introduction of ADT has been delayed as a result of complications around the Highlands and Islands exemption. We will include Scottish Government policy in the forecast when sufficient detail on the introduction of ADT and any changes to tax rates is made available.

⁹⁴ Scottish Government (2017) Programme for Scotland 2017-18 ([link](#))

Comparison to OBR forecast

- 3.167** There are two main differences between the Commission's Scottish APD forecast and the OBR's forecast. Firstly, the baseline estimate of Scottish APD is different. Secondly, our in-year estimate of receipts in 2017-18 is higher.
- 3.168** The OBR takes the share of APD revenue raised in Scotland as the mid-point between 2015-16 and 2016-17 estimates presented by HMRC (8.9 & 9.6 per cent) and the Scottish Government (8.0 & 8.3 per cent). This gives a figure of 8.7 per cent. Our forecast uses the 2016-17 estimate of Scottish APD receipts produced by the Scottish Government, as it is consistent with our approach.
- 3.169** The main difference in methodologies is the survey used to allocate passengers into bands of travel. HMRC use the International Passenger Survey (IPS), which may overestimate the share of Band B passengers in Scotland and the rest of the UK. The Commission uses the CAA Passenger Survey, which is less likely to overestimate the share of Band B passengers. However, the CAA surveys are less timely than the IPS.⁹⁵
- 3.170** There are other smaller differences in the approaches such as, how exempt passengers are calculated and the proportion of passengers travelling in the reduced rate and standard rate of travel.
- 3.171** The second difference arises as CAA data on Scottish passenger numbers for the first half of 2017-18 show an eight per cent increase in compared to the first half 2016-17. This increase in passenger numbers has not been mirrored in the rest of the UK. The OBR assume the Scottish share of the UK APD forecast remains constant while our forecast incorporate this increase in passenger numbers. Therefore, our forecasts show a larger increase in between 2016-17 and 2017-18.
- 3.172** Table 3.36 shows the difference between the two forecasts of Scottish APD.

⁹⁵Most recent CAA surveys by airport: Glasgow and Edinburgh 2015-16, Aberdeen 2013 & Prestwick 2009. IPS covered Scottish Airports in 2016

Table 3.36: Forecasts of Scottish APD

£ million	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC Dec 2017	264	292	306	314	324	336	348
OBR Nov 2017	282	290	305	317	327	339	352
Difference	+18	-2	-1	+3	+3	+3	+4

Source: Scottish Fiscal Commission; OBR Devolved Taxes Forecast Autumn Budget 2017 ([link](#))

Scottish Landfill Tax

Table 3.37: SFC forecast of Scottish Landfill Tax

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	148	137	106	88	90	82	82

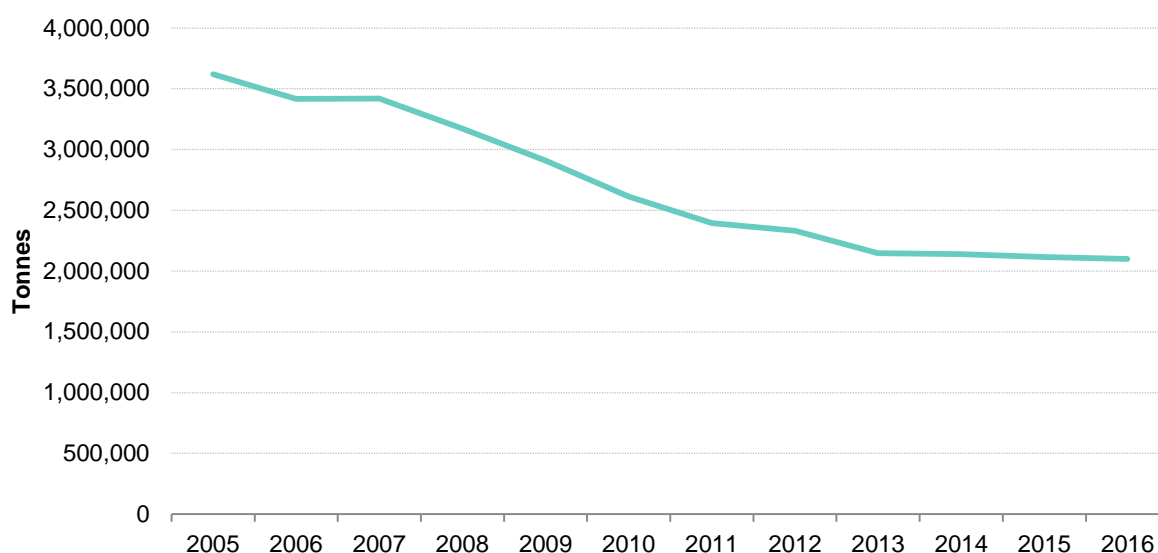
Source: Scottish Fiscal Commission

Background

3.173 Scottish Landfill Tax (SLfT) is a tax on the disposal of waste to landfill, with the amount of tax payable determined by the weight of waste being disposed of on the basis of two rates. In 2018-19 the standard rate of tax has been announced at £88.95 per tonne, with a lower rate of £2.80 per tonne for certain inert materials such as rocks and soils.

3.174 SLfT is an environmental tax, aimed at reducing the amount of waste landfilled and the associated environmental damage. Since 2005 landfill volumes have fallen consistently, although recently there is evidence that this reduction has begun to stall in Scotland.

Figure 3.13 Mixed Waste Landfilled in Scotland



Source: SEPA Waste Landfilled in Scotland 2016 ([link](#))⁹⁶

3.175 Despite the apparent slowing of this trend the Commission is forecasting significant reductions in the amount of waste landfilled over the next five

⁹⁶ Mixed waste constitutes two SEPA reporting categories: 'household and similar wastes' and 'sorting residues', and is used here as a proxy for standard rated waste.

years. Planned increases in the capacity of incineration facilities are expected to divert waste away from landfill. This alternative treatment to landfill across Scotland is in part a reaction to the increasing cost of the tax on disposal via landfill. It also indicates that local authorities and waste management companies are beginning to plan ahead in response to the changing regulatory landscape and the ban on the landfill of biodegradable municipal waste from 2021.⁹⁷

Description of modelling approach

3.176 Our model uses available outturn data from Revenue Scotland for 2017-18 on the amount of standard and lower rate waste being landfilled. Data from the first quarter is scaled up to the full year using the average proportion of annual landfilled waste that has historically been in quarter one. This is then projected forward over the entire forecast period, with adjustments made to reflect anticipated changes to waste generation and household recycling rates. Our current forecast assumes that waste generation remains largely flat over the forecast because of the current weak economic outlook, with household recycling continuing to grow in line with the trend rate of growth observed since 2009 of roughly one per cent annually.

3.177 Final adjustments are then made to this baseline to account for anticipated increases in the capacity of incineration facilities across Scotland that can be expected to divert standard rate waste away from landfill. The Commission has worked with experts within the Scottish Environment Protection Agency to ensure these projections of future incinerator capacity are up-to-date and as far as possible reflect the likely timescales for these facilities coming on line. This aspect of the forecast will continue to be reviewed and updated regularly, given the uncertainties involved with the precise start dates for these facilities.

Table 3.38 Impact of increasing incineration capacity on SLfT revenue

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Reduction in SLfT revenue	-1	-35	-56	-58	-69	-73

Source: Scottish Fiscal Commission

3.178 After accounting for changes to waste generation, recycling and incineration in the baseline, a forecast of revenue is made by applying the relevant tax rate to the forecasted amount of landfilled waste. The current policy assumption is that the tax rates are matched to those announced by the UK Government,

⁹⁷ See, The Waste (Scotland) Regulations 2012, Regulation 4 ([link](#))

and then in subsequent years uprated in line with RPI. The maximum contributions allowed to the Scottish Landfill Communities Fund is then netted off this total to arrive at a final forecast of revenue.

Description of Scottish policy changes

3.179 The Scottish Government has legislated for a ban on the landfilling of biodegradable municipal waste from 2021 onwards, with the ban being written into permits issued by SEPA to landfill sites allowing them to operate. This will require significant volumes of waste to be diverted to alternative management options, which will particularly affect local authorities who manage large amounts of biodegradable municipal waste through the kerb-side collection of black-bag waste.

3.180 Exactly how and when this diversion away from landfill will be achieved is still subject to some uncertainty. The projected rise in incineration capacity will significantly reduce the amount of waste landfilled in the future, but there is still a shortfall between our current projection of incinerator capacity and our best estimate of the amount of waste needing to be diverted from landfill as a result of the ban. Other management options such as increased recycling, exporting waste to Europe as refuse derived fuel, or landfilling in England may contribute to this diversion but there is currently little evidence as to how and when additional waste will start to be diverted to these in the lead up to the ban. The Commission will work with the Scottish Government and SEPA to establish the evidence base for how and when waste can be expected to be diverted from landfill in the lead up to 2021, and the profile of waste landfilled after the ban is implemented. Once this evidence base has been established this will then be included in our future forecasts of SLfT revenue.

Forecast

3.181 The Commission's forecast of SLfT is shown in the table below, along with how the forecast has developed since the Scottish Government's forecast for the Draft Budget 2017-18.

Table 3.39 Scottish Landfill Tax forecast

£ million	2016-17 outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SG Dec 2016	148	149	118	109	112	106	
Data updates		-6	-4	-11	-11	-12	
Methodology changes		-6	-7	-10	-11	-12	
SFC Dec 2017	148	137	106	88	90	82	82
Difference		-12	-12	-21	-22	-24	

Source: Scottish Fiscal Commission Scottish Government (2016) Draft Budget 2017-18 Devolved Taxes Methodology ([link](#))

3.182 The largest change to the forecast has been the inclusion of the most recent Revenue Scotland data for 2017-18, which showed lower levels of standard rate waste landfilled in quarter one than previously forecast. The inclusion of updated projections of incineration capacity provided by SEPA has increased revenue in early years of the forecast, as delays have occurred in the construction of the first facility expected to be completed in the Scottish Government's December 2016 forecast.

3.183 The use of average quarterly shares from HMRC to scale up the 2017-18 quarter one data as opposed to Revenue Scotland shares over a shorter time period has also reduced the forecast over the entire five years. Other methodology changes such as the inclusion of an adjustment to the baseline for the amount of waste generated and household recycling have had a smaller impact on the forecast.

Forecast Uncertainty

3.184 The largest factor driving the forecast is the timing and size of additional incineration capacity. While the Commission has engaged with SEPA to ensure projections of capacity reflect intelligence available at the time, these are large complex construction projects that can encounter significant delays for a variety of reasons. Delays in the construction of the first site due for completion in our model has already resulted in diversion from landfill being lower in 2017-18 and 2018-19 than would have otherwise been the case. The table below demonstrates the potential impact on the forecast of a twelve month delay to each of the incineration facilities included in our model coming on-line.

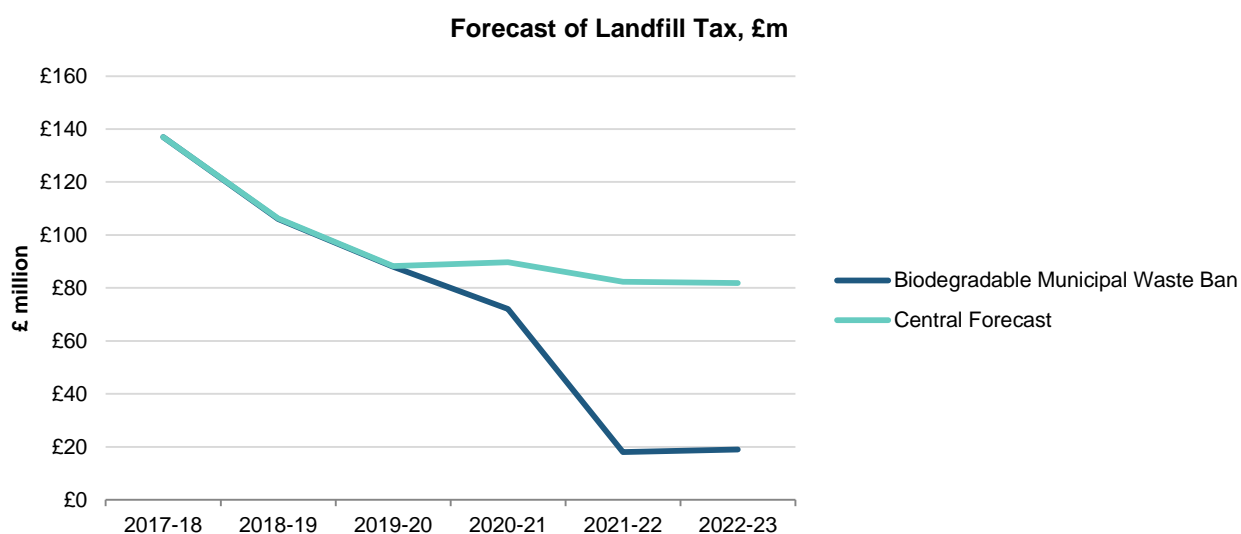
Table 3.40 Impact of delays on forecast

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Central Revenue	137	106	88	90	82	82
Twelve Month	138	140	107	90	92	84
Delay						
Difference	+1	+33	+19	0	+9	+3

Source: Scottish Fiscal Commission

- 3.185** Other factors that could divert waste from landfill but are not currently incorporated in the forecast, such as the export of refuse derived fuel (RDF), represent another source of uncertainty. While evidence currently available suggests this market has a significantly smaller effect in diverting waste from landfill than incineration, it has grown in recent years and may have the potential to grow or decline rapidly in response to short-term market conditions. For local authorities without access to an incineration facility, it represents one option to meet their obligations under the biodegradable municipal waste landfill ban, suggesting it may experience further growth. In future forecasts the Commission will look to build the evidence base for the current RDF market in Scotland and potentially include a projection of RDF exports within the forecast.
- 3.186** Finally, progress towards implementing the ban on biodegradable municipal waste landfilled from 2021 represents a major source of uncertainty in our forecast. Once implemented in full, volumes of standard rate waste landfilled will fall to levels significantly lower than those currently forecast from 2020-21 onwards. Sensitivity analysis shown below, which assumes additional diversion from landfill begins in 2020-21, suggests SLfT revenue could fall as low as £20 million per annum by the end of the forecast as a result of the ban. The Commission will continue to engage with the Scottish Government and SEPA to establish how local authorities will respond to the ban and how compliance with the ban will be approached.

Figure 3.14 Impact of Biodegradable Municipal Waste ban



Source: Scottish Fiscal Commission

Comparison to OBR forecasts

3.187 The OBR also produces a forecast of SLfT, published as part of its Devolved Taxes Forecast Publication. The approach taken by the OBR applies the forecasted percentage change in receipts in the rest of the UK to the latest outturn data from Revenue Scotland. A comparison between forecasts is shown in the table below.

Table 3.41: Comparison between SFC and OBR SLfT forecasts

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC Dec 2017	137	106	88	90	82	82
OBR Nov 2017	140	123	108	101	95	90
Difference	3	17	20	11	13	8

Source: Scottish Fiscal Commission, OBR Devolved Taxes Forecast November 2017 ([link](#))

3.188 The differences between these forecasts result from several factors, which include slightly different methods used to estimate in-year receipts for 2017-18, along with differing expectations of waste generation and recycling in Scotland (which the OBR assumes will be the same as in the rest of the UK). Finally the Commission's use of Scottish-specific information regarding the future capacity of incineration facilities will also be a source of difference between the forecasts.



Chapter 4

Social Security

Introduction

- 4.1 We are responsible for producing forecasts of social security expenditure in Scotland. We have produced forecasts for a variety of areas including the main benefits devolved under the Scotland Act 2016, the Scottish Welfare Fund and the new employability services.⁹⁸
- 4.2 Our expenditure forecasts are summarised in Table 4.1. These cover some areas included in the Scottish Government's Draft Budget and a number of benefits the Scottish Government has committed to devolving by summer 2019. Box 4.1 sets out the areas we are forecasting and the basis for our forecasts. As the UK Government continues to transfer powers to the Scottish Government in the future, we will produce independent forecasts of expenditure on these areas.
- 4.3 The Social Security (Scotland) Bill provides for the devolution of benefits covered by the Scotland Act 2016.⁹⁹ The dates for devolution are still to be agreed between the Scottish and UK Governments. The Scottish Government's intention is to set out all detailed rules relating to eligibility criteria and rates of benefits in subordinate legislation. To support the Scottish Parliament and the public in understanding and scrutinising the Scottish Government's policy the Commission will aim to produce forecasts of expenditure to accompany subordinate legislation relating to areas in our remit.

⁹⁸ The Commission's specific role is defined in the Scottish Fiscal Commission (Modification of Functions) Regulations 2017 ([link](#))

⁹⁹ Social Security (Scotland) Bill [as introduced] ([link](#))

Table 4.1 Summary of social security forecasts 2016-17 to 2022-23

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Carer's Allowance (CA)	234	247	265	282	297	309	321
CA Supplement	0	0	35	30	32	33	34
Discretionary Housing Payments	50	60	61	62	63	65	66
Scottish Welfare Fund	33	33	34	35	35	35	35
Employability Services	0	11	24	27	27	18	3
Fair Start Scotland	0	0	18	27	27	18	3
Work Able Scotland	0	3	0	0	0	0	0
Work First Scotland	0	9	6	0	0	0	0
Funeral Payments	5	5	5	5	5	5	5
Healthy Start Vouchers	5	4	4	4	4	4	3
Sure Start Maternity Grant	2	3	3	3	3	3	3
Total Social Security	329	362	430	448	465	471	470

Source: Scottish Fiscal Commission, DWP Benefit Expenditure by Country and Region 2016-17 ([link](#)), Scottish Government Discretionary Housing Payments Statistics ([link](#)), Scottish Government Scottish Welfare Fund Statistics ([link](#)), DWP unpublished information and Department of Health unpublished management information

Box 4.1 Devolved social security expenditure

We are required to forecast devolved social security expenditure and have forecast some benefits not yet devolved which we consider relevant to the Scottish Government's Budget. Our forecasts therefore cover social security expenditure already devolved to the Scottish Parliament, newly created benefits and reserved benefits where the Scottish Government has announced plans for devolution. Our forecasts cover expenditure on the benefits or programmes but do not cover the associated administrative costs, which are determined by the Scottish Government.

Devolved social security: Expenditure devolved to Scotland and included in the Scottish Government's Budget. Since this expenditure is already devolved, we only consider Scottish Government policy in our forecasts. The devolved expenditure we forecast and the dates of devolution are as follows:

- Scottish Welfare Fund (April 2013)

- Employability Services (April 2017)
- Discretionary Housing Payments (April 2017)

Reserved social security: We have forecasted a number of benefits which are currently reserved but where the Scottish Government have announced plans for devolution. As we have not received specific policy details, or dates for devolution, we have forecasted these benefits based on existing UK Government policy.

These include:

- Carer's Allowance (by summer 2018, to be initially administered by DWP)
- Funeral Payments (by summer 2019)
- Sure Start Maternity Grant (by summer 2019)
- Healthy Start Vouchers¹⁰⁰ (April 2019)

Newly created benefits: These are benefits created by the Scottish Parliament under the powers in the Scotland Act 2016. When producing these forecasts, we only consider Scottish Government policy. Currently the only newly created benefit we forecast is:

- Carer's Allowance Supplement (During 2018-19)

As the Scottish Government announces plans for devolution of other benefits we will incorporate these into our forecasts.¹⁰¹

4.4 The approach we have taken to forecast expenditure varies by benefit. In most cases we have adapted models developed by analysts in the Scottish Government to produce five-year forecasts. For some benefits we have relied on Scottish Government analysts to produce forecasts under the guidance of the Commissioners and our staff. We plan to bring this activity in-house in the new year as we expand the team working on social security. We will take a similar approach as we have previously with our tax and economy forecasts models, refining them iteratively as more information becomes available.

4.5 In the following sections, each area of social security will be examined in turn. The sections will describe the methods used to produce the forecasts, impacts of any new policy measures, and for Carer's Allowance, provide a comparison to the OBR illustrative estimate of expenditure.

¹⁰⁰ Despite Healthy Start Vouchers being reserved, they are currently funded from the Scottish Government budget. This structure is an anomaly and not replicated in any other benefits.

¹⁰¹ The benefits to be devolved are: Attendance Allowance, Disability Living Allowance, Personal Independence Payment, Industrial Injuries Disablement Allowance, Severe Disablement Allowance, Cold Weather Payment and Winter Fuel Payment.

- 4.6 Whilst some of the challenges of forecasting social security expenditure similar to the challenges we face forecasting tax receipts, some are unique to social security. The main areas of uncertainty including demographics, take-up rates and any changes to benefits introduced by the Scottish Government are set out in Box 4.2.

Box 4.2: General uncertainties for forecasting Social Security expenditure

Forecasts of social security expenditure face a number of specific uncertainties. While the specific risks to each forecast are discussed in the relevant section, we set out below some of the common areas of uncertainty for our social security forecasts.

Demographics matter: some benefits are more likely to be taken up by women than by men; others are targeted at particular age groups. To capture the effect of changing demography of the population over the forecast horizon, many of the modelling approaches incorporate population projections. In line with our economic forecasts, the 50 per cent future EU migration variant of ONS 2016-based population projections is used.¹⁰² Any variance from the chosen projected population may impact on expenditure.

Not all eligible individuals apply for benefits. The proportion of the eligible population which applies and receive the benefit is known as the take-up rate. Take-up rates are often challenging to calculate as little information is available on the proportion of the population who could claim a benefit but are not doing so. Box 4.3 sets out further information on take-up rates.

Eligibility for some of the benefits we are forecasting depends, in part, on individuals' entitlement to other benefits. To estimate the proportion of the relevant population in receipt of these benefits our forecasts use the DWP Policy Simulation Model (PSM). The PSM draws on information from the Family Resources Survey and we use the trends it identifies to inform our judgements. Uncertainties about the population on qualifying benefits will affect our forecasts of expenditure.

The Welfare Reform Act 2012 introduced Universal Credit as an overhaul of the tax credit and benefit system.¹⁰³ The rollout of Universal Credit is a source of uncertainty in some of our forecasts. Universal Credit is still being introduced in stages across the UK and will replace what are referred to as legacy benefits: Housing Benefit, Income Support, income-based Jobseekers Allowance (JSA), income-related Employment and Support Allowance (ESA), Child Tax Credit and Working Tax Credit.

¹⁰² ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

¹⁰³ Welfare Reform Act 2012 ([link](#))

We do not forecast expenditure on Universal Credit as it is a reserved benefit. But it is included in the qualifying criteria for several of the benefits we forecast. There are also some crossovers between eligibility for Carer's Allowance and the carer's element of Universal Credit which may impact on our future forecasts.

As a result, the rate at which Universal Credit is rolled out creates additional uncertainties in some of our forecasts. In the cases where Universal Credit is linked to eligibility criteria, individuals transitioning from a legacy benefit onto Universal Credit may find their underlying entitlement to one of the benefits we forecast is altered. Where we are using the PSM to inform our judgements on eligibility, a gradual rollout rate for Universal Credit is assumed, capturing changes in eligibility. Any unexpected delays and changes to the Universal Credit rollout may impact expenditure.

The Scottish Government is in the process of setting up the Scottish social security agency to administer devolved benefits. Changes to the design of the benefits once developed and the delivery of the benefits are likely to impact on future levels of expenditure. The setup of the agency is in its early stages; at this time it is not possible to quantify the impact of any changes. Our forecasts of benefits which have not yet been devolved are therefore based on current UK Government policy.

As further information becomes available regarding policy and administrative changes the Scottish Government plans to make we will update our forecasts.

Carer's Allowance

Forecast

Table 4.2: Forecast expenditure on Carer's Allowance and Supplement

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Carer's Allowance (CA)	234	247	265	282	297	309	321
CA Supplement	0	0	35	30	32	33	34
Total expenditure	234	247	300	313	329	342	355

Source: DWP Benefit Expenditure by Country and Region 2016-17 ([link](#)), Scottish Fiscal Commission

Background

- 4.7** Carer's Allowance (CA) is paid to people who care for someone who is disabled. Initially introduced as Invalid Care Allowance in 1976 it was renamed CA in April 2003. Since 2011, CA has been uprated for each financial year in line with CPI from the previous September. The rate for 2018-19 is anticipated to be £64.60 per week.¹⁰⁴
- 4.8** To be eligible for CA, both the carer and care recipient must meet qualifying criteria. The most notable criteria are that the care provider must be over 16, providing care for at least 35 hours per week and earn no more than £120 per week in 2018-19.¹⁰⁵ The care recipient must also be in receipt of a qualifying benefit.¹⁰⁶
- 4.9** CA is subject to overlapping benefit rules, which state individuals should not receive more than one income replacement benefit at one time.¹⁰⁷ If an individual is receiving another income replacement benefit, claiming CA may result in reduced payments of the other benefit or non-payment of CA. This is particularly relevant when considering those reaching state pension age (SPA); claimants are not able to receive their full state pension and CA

¹⁰⁴ UK Government's proposed benefit and pension rates for 2018-2019 ([link](#))

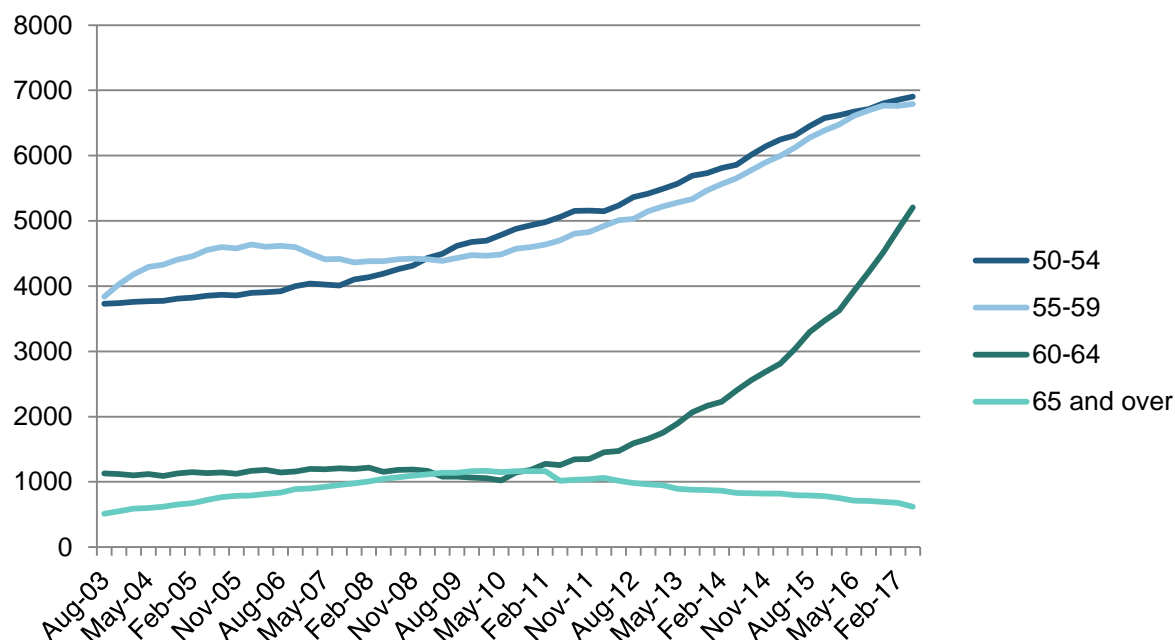
¹⁰⁵ These are some of the eligibility criteria for 2018-19. The earnings limit in particular is subject to change.

¹⁰⁶ The CA qualifying benefits are: attendance allowance (AA), the highest or middle rate of disability living allowance (DLA) care component, either rate of the daily living component of personal independence payment (PIP), armed forces independence payment or constant attendance allowance in respect of an industrial or war disablement. Full eligibility criteria can be found on the UK Government's page on CA eligibility ([link](#))

¹⁰⁷ More information on overlapping benefit rules can be found in DWP staff Decision maker's guide: Vol 3 Chapter 17 ([link](#))

simultaneously. Figure 4.1 illustrates how the number of females aged 60 – 64 receiving CA has increased as the female SPA has risen since 2010.¹⁰⁸

Figure 4.1: Number of females aged 50 and over receiving Carer’s Allowance payment in Scotland



Source: DWP Stat Xplore data ([link](#))

Approach to forecasting

- 4.10** We estimate the number of eligible CA claimants over the next five years. Historic administrative statistics on the number of claimants are published by DWP.¹⁰⁹ These are used to estimate the number of new claimants flowing on to the benefit (inflow) and the outflow as claimants leave the benefit.
- 4.11** The historic flows are broken down into age groups and by gender then converted into rates and forecast using ARIMA models.¹¹⁰ To estimate inflow volumes, the inflow rates are combined with population projections: the 50 per cent future EU migration variant of ONS 2016-based population projections is used, in line with our other forecasts.¹¹¹ To estimate outflow volumes, outflow

¹⁰⁸ The female SPA will reach 65 by December 2018.

¹⁰⁹ DWP Stat Xplore ([link](#))

¹¹⁰ An ARIMA (Auto-Regressive Integrated Moving Average) model is a basic type of statistical forecasting model. For further information on ARIMA models see Box 2.1 in Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

¹¹¹ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

rates are combined with the number of eligible claimants. A set of stocks and flows equations are used to combine these volumes and calculate the future number of eligible CA claimants.

- 4.12 As CA is subject to overlapping benefit rules not all eligible CA claimants will receive a payment. The eligible claimants who receive the benefit are referred to as the caseload and the proportion of the caseload who receive payment is defined as the caseload rate. In general the caseload rate is high for younger claimants as fewer are affected by overlapping benefit rules.
- 4.13 Since it is not possible for an eligible claimant to receive CA and their state pension at the same time, the number of females aged 60 to 64 receiving CA has increased over time, as their SPA has increased, as shown in Figure 4.1. The SPA will increase to 66 for both males and females between February 2019 and October 2020.¹¹² An adjustment is made to account for the caseload rate for claimants aged 65 to 70 increasing over this time period.
- 4.14 In line with the UK Government's current policy, the weekly payment rate is projected over the forecast horizon by uprating the payment amount at the start of each financial year in line with the OBR CPI forecast from the previous September.¹¹³
- 4.15 Expenditure is calculated by multiplying the forecast caseload by forecast payment amount. A final three per cent adjustment is made to align the expenditure calculated by the model with historic expenditure data published by DWP. This results in a final (pre-measures) expenditure forecast.

Scottish and UK Government policy changes

- 4.16 The UK Government have announced no changes to CA, continuing to increase the rate in line with CPI, the anticipated rate in 2018-19 is £64.60.
- 4.17 The Scottish Government intends that devolved benefits will be administered by the Scottish social security agency, once it is established. The Scottish Government have also announced a policy intention to increase the CA weekly rate to match the rate of JSA.¹¹⁴ In 2018-19 this would equate to an increase from £64.60 to £73.10 per week.¹¹⁵

¹¹² DWP SPA timetable ([link](#))

¹¹³ OBR (2017) November 2017 Economic and Fiscal Outlook Tables. ([link](#)). Table 4.1, CPI Forecast.

¹¹⁴ Scottish Government's page detailing their CA policy intention ([link](#))

¹¹⁵ There are several different JSA rates. The income based JSA rate for over 25s is £73.10 and the CA Supplement will effectively top up carer's payments to this level.

- 4.18 Prior to CA being delivered by the agency, CA will continue to be administered by DWP on a weekly basis at the rate set by the UK Government. The Social Security (Scotland) Bill provides for a Supplement to be paid to recipients of CA in Scotland, to make up the difference between the rates of CA and JSA.¹¹⁶ We are therefore forecasting both expenditure on the main CA and expenditure on the CA Supplement.
- 4.19 The Supplement will be paid as two lump sums per financial year, each worth six months of difference between CA and JSA. For each lump sum, a specified qualifying date will be set and everyone in receipt of CA on that date will receive the full six month lump sum. The Scottish Government has yet to set the eligibility dates.
- 4.20 In the absence of definitive qualifying dates for the Supplement, we assume all CA recipients receive the higher amount, each week, commencing 1 April 2018. This is different to the planned lump sum method by which payments will occur, but this is not expected to significantly alter expenditure. More information on the approach taken to cost the Supplement can be found in Annex A.

Forecast

Table 4.3: Forecast expenditure on Carer's Allowance and Supplement

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Carer's Allowance (CA)	234	247	265	282	297	309	321
CA Supplement	0	0	35	30	32	33	34
Total expenditure	234	247	300	313	329	342	355

Source: DWP Benefit Expenditure by Country and Region 2016-17 ([link](#)), Scottish Fiscal Commission.

- 4.21 The cost of the Supplement decreases from 2018-19 to 2019-20 as JSA is frozen at £73.10 while CA continues to increase in line with CPI.¹¹⁷ In subsequent years, JSA is also uprated in line with CPI which accounts for the increase in the cost of the supplement from 2020-21 onwards.

¹¹⁶ Social Security (Scotland) Bill ([link](#))

¹¹⁷ The working age benefit freeze was implemented in Section 2.115 of the Summer Budget in 2015 ([link](#))

Forecast uncertainty

- 4.22 Many of the uncertainties outlined in Box 4.2 apply to CA. Additionally, expenditure on CA depends on the value of the weekly payment, any changes in inflation or UK or Scottish Government policy will have an impact on our expenditure forecast.
- 4.23 Universal Credit contains a carer's element with similar qualifying criteria, therefore the rollout of Universal Credit may impact on CA expenditure. There are no earnings limits applicable for the carer's element of Universal Credit which may incentivise people to apply for this element rather than CA. Those claiming CA are, however, eligible for national insurance credits and in Scotland will be eligible for the CA Supplement. We will monitor the rollout of Universal Credit and any potential impacts on our expenditure forecasts.

Comparison to OBR illustrative estimate

- 4.24 The OBR published an illustrative estimate of CA expenditure in Scotland at the Autumn Budget 2017.
- 4.25 The OBR based their estimate on the Scottish share of CA expenditure in Great Britain, using the average of 2015-16 and 2016-17 (8.75 per cent). This is applied to their CA forecast for GB to produce the illustrative estimate. Differences in expenditure may arise because of the different approaches taken and the different variants of population projections used. The OBR have used the principal variant while we have used the 50 per cent EU migration variant.

Table 4.4: Forecast comparison table

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC CA forecast	247	265	282	297	309	321
OBR illustrative estimate	254	277	295	311	327	344

Source: OBR (2017) Devolved Taxes forecast November 2017 ([link](#)), Scottish Fiscal Commission. N.B. forecast excludes expenditure on the Supplement

Discretionary Housing Payments

Forecast

Table 4.5: Forecast expenditure on Discretionary Housing Payments

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Total expenditure	50	60	61	62	63	65	66

Source: Scottish Government Discretionary Housing Payments Statistics ([link](#)), Scottish Fiscal Commission

Note: In 2016-17 DWP made £15.2 million available to Scottish local authorities for DHP funding. The Scottish Government provided an additional £35 million. Total funding was £50.2 million.

Background

- 4.26 Discretionary Housing Payments (DHPs) are grants awarded by local authorities to people in need of financial assistance with housing costs. The Scottish Government provides funding to local authorities who deliver the grants and are responsible for managing the budget throughout the year.
- 4.27 Individuals in receipt of Housing Benefit or the housing cost element of Universal Credit are eligible to apply for DHPs. Local authorities decide the population who receive payments; DHPs can be a one off payment or could last an indefinite length of time. They can be paid to the claimant or directly to their landlord.
- 4.28 The UK Government introduced the removal of the spare room subsidy (RSRS) also known as the 'Bedroom Tax' from April 2013. RSRS reduces the amount of Housing Benefit or housing component of Universal Credit for claimants living in social housing categorised as having one or more spare bedrooms. One spare bedroom reduces payments by 14 per cent, two results in a reduction of 25 per cent.
- 4.29 DHPs were devolved to the Scottish Parliament in April 2017. The Scottish Government have committed to fully mitigate the RSRS using DHPs.¹¹⁸

Methodology

- 4.30 The budget for DHPs is split into two parts. The first is demand-led and dedicated to the mitigation of the RSRS. The second is a discretionary fund

¹¹⁸ Scottish Government (2017) Welfare Reform (Further Provision) (Scotland) Act 2012 – Annual Report ([link](#))

for all other DHP claims. In 2017-18 the discretionary fund was £10.9 million and we assume this stays constant over the forecast horizon.

- 4.31 To forecast the expenditure required to mitigate the RSRS, we estimate the reduction in payments of Housing Benefit and the housing component of Universal Credit resulting from the RSRS in 2017-18. The reduction was calculated from DWP published statistics on Stat-Xplore based on data for the first five months of 2017-18 extrapolated to cover the full financial year.
- 4.32 As social rent increases, the amount cost of mitigating the RSRS also increases. Based on Scottish Housing Regulator survey we use the latest three-year average of annual rent increases to forecast the increase in costs of mitigating the RSRS each year, this is 2.5 per cent.¹¹⁹
- 4.33 We assume the caseload affected by the RSRS is fixed across the forecast horizon. This assumption appears reasonable as analysis shows the number of social housing units in Scotland changed by 0.2 per cent between 2014-15 and 2016-17.

Scottish Government policy

- 4.34 The Scottish Government have not announced any changes to DHPs in the Draft Budget 2018-19.
- 4.35 The Scottish Government plan to use the Universal Credit powers devolved under the Scotland Act 2016 to mitigate the RSRS for claimants on Universal Credit.¹²⁰ As we have not received firm policy details, we assume DHPs continue to be the only source of funding for mitigating the RSRS. We will review and update this assumption for our future forecasts.

Forecast

- 4.36 Table 4.6 shows our forecast for DHPs. We expect funding for DHPs to rise from £60 million in 2017-18 to £66 million in 2022-23. This is because of the rising costs of mitigating the RSRS.

¹¹⁹ Scottish Housing Regulator (2017) Charter data – all social landlords ([link](#))

¹²⁰ Scottish Government (2017) Delivering social security for Scotland's people: ministerial statement ([link](#))

Table 4.6 Forecast expenditure on Discretionary Housing Payments

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Mitigation of RSRS		49	50	51	53	54	55
Other DHPs		11	11	11	11	11	11
Total expenditure	50	60	61	62	63	65	66

Source: Scottish Government Discretionary Housing Payments Statistics ([link](#)), Scottish Fiscal Commission
 Note: In 2016-17 DWP made £15.2 million available to Scottish local authorities for DHP funding. The Scottish Government provided an additional £35 million. A breakdown between expenditure on RSRS and other DHPs for 2016-17 is not available.

Uncertainties

- 4.37 Aside from the uncertainties mentioned in Box 4.2 there are further uncertainties specific to DHPs. The main uncertainties relate to the forecast of expenditure mitigating the RSRS.
- 4.38 We assume that the cost of mitigating the RSRS grows by the average increase in social housing rent over the last three years (2.5 per cent). If social housing rent changes by a different amount then expenditure may deviate from our forecast. We also assume the number of households affected by the RSRS remains fixed, if the number affected were to change significantly this could affect expenditure.
- 4.39 We do not expect the move onto Universal Credit to affect our forecast of DHPs. A claimant of Housing Benefit is likely to be eligible for the housing component of Universal Credit. Secondly, the amount paid (and therefore the amount reduced because of the RSRS) depends on the social housing rent which is unlikely to be affected by the move to Universal Credit. However, this is an area of uncertainty. We will continue to monitor the impact of the move to Universal Credit on the RSRS.

Scottish Welfare Fund

Forecast

Table 4.7: Forecast expenditure on the Scottish Welfare Fund

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Scottish Welfare Fund	33	33	34	35	35	35	35

Source: Scottish Government Scottish Welfare Fund Statistics ([link](#)), Scottish Fiscal Commission

Background

- 4.40 The Scottish Welfare Fund (SWF) was set up in April 2013 to provide grants for people on low incomes, following the devolution of parts of the Social Fund.¹²¹ Similar to DHPs, Scottish Government provides funding and local authorities deliver the discretionary grants.
- 4.41 From April 2017, the UK government reduced eligibility for 18 to 21 year olds claiming the housing component of Universal Credit. Those making new claims in a full service area will not receive the housing component unless they meet one of the exemptions.¹²² The Scottish Government has committed to mitigate this change on an interim basis funded through the SWF.¹²³

Methodology

- 4.42 The budget for the SWF has two components. The first is used to provide grants for people on low incomes. In 2017-18, £33 million was allocated to this and we assume this will remain constant over the forecast horizon. The second component mitigates the reduction of the housing component of Universal Credit for 18 to 21 year olds.
- 4.43 To forecast the cost of mitigating Universal Credit changes for 18 to 21 year olds, we estimate the number of single Housing Benefit claimants aged 18 to 21 in receipt of JSA in each local authority from DWP Stat-Xplore data.¹²⁴ We

¹²¹ Scottish Government and COSLA (2012) Welfare Reform in Scotland ([link](#))

¹²² DWP (2017) Housing costs for 18 to 21 year olds Guidance ([link](#))

¹²³ Scottish Government (2017) UK housing benefit changes 'shameful' – ministerial statement ([link](#))

¹²⁴ JSA is used as a proxy for those affected by the reduction in eligibility. Individuals with a disability are more likely to be claiming ESA or IS than JSA and would be eligible for an exemption. The use of single adult JSA claimants also excludes those responsible for a child as they would qualify for an exemption. Source data from DWP Stat-Xplore ([link](#))

assume the affected caseload remains fixed. As expenditure is directly affected by the roll-out of Universal Credit we model this based on the latest schedule from DWP.¹²⁵

- 4.44 The average claim is estimated based on the Local Housing Allowance (LHA) rate for a room in a shared property.¹²⁶ This is the maximum weekly amount an individual can claim for housing in the private sector. Despite some claimants being in social housing, we consider LHA rates a suitable proxy for average rent. LHA rates are frozen until 2019-20. From 2020-21 onwards we assume the LHA rates grow at 2 per cent per year.
- 4.45 If all identified individuals are both eligible and claim, we estimate a maximum cost of £3 million per year. This cost is reduced by 50 per cent to reflect the uncertainty about the take-up rate (see Box 4.3) and the possibility that some individuals identified as being affected may qualify for an exemption. Evidence to date from local authorities suggests individuals are being supported to apply for an exemption rather than receiving payment through the SWF, although the caseload to date is small. We will monitor this assumption as outturn data become available.

Scottish Government policy

- 4.46 The Scottish Government have made no changes to the SWF in the Draft Budget 2018-19.
- 4.47 The Scottish Government plan to use powers devolved in the Scotland Act 2016 to create a new benefit to mitigate the withdrawal in the housing component for 18 to 21 year olds.¹²⁷ We have not received specific policy detail from the Scottish Government; therefore we assume the SWF continues to be used to mitigate the reduction in eligibility for 18 to 21 year olds.

¹²⁵ DWP (November 2017) [Universal Credit Transition Rollout Schedule](#) ([link](#))

¹²⁶ Scottish Government (2017) Local Housing Allowance rates 2017-2018 ([link](#))

¹²⁷ Scottish Government (2017) Welfare Reform (Further Provision) (Scotland) Act 2012 - Annual Report ([link](#))

Forecast

- 4.48 Table 4.8 shows our forecast of SWF expenditure increasing from £33 million in 2017-18 to £35 million in 2022-23. The increase is because the roll-out of Universal Credit increases the number of 18 to 21 year olds no longer qualifying for the housing element and applying to the SWF.

Table 4.8 Forecast expenditure on the SWF

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Mitigation of 18 to 21 year olds reduction in eligibility	0	0	1	2	2	2	2
Other SWF funding	33	33	33	33	33	33	33
Total expenditure	33	33	34	35	35	35	35

Source: Scottish Government Scottish Welfare Fund Statistics ([link](#)), Scottish Fiscal Commission

Uncertainties

- 4.49 Aside from the uncertainties mentioned in Box 4.2 there are specific uncertainties to SWF relating to the cost of mitigating the 18 to 21 year old reduction in eligibility for the housing component of Universal Credit.
- 4.50 New Universal Credit claimants only lose their housing entitlement in full Universal Credit service areas. Any delays to the roll-out of Universal Credit would delay the cost of mitigating the reduction in eligibility for 18 to 21 year olds. We have reduced the estimated total cost by 50 per cent to account for both the likely take-up rate (see Box 4.3) and that some individuals identified as being in the caseload may qualify for an exemption. We will monitor expenditure statistics from local authorities and adjust the assumption if the data suggest a different adjustment would be more appropriate.

Box 4.3 – Take-up rate

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

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

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

Take-up rates are challenging to calculate as often little information is available on the portion of the population who are eligible but not claiming. In most cases, the size of the eligible population is uncertain and must be estimated from available data sources. This is particularly difficult for benefits where eligibility depends on a population claiming another separate benefit. For new benefits or reliefs, the number of claimants is also unknown and must be estimated. Therefore, take-up rates reflect uncertainties in the size of the eligible population as well as the likelihood that eligible individuals claim.

Take-up rates vary across different benefits and reliefs, with possible explanations being:

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

The Scottish Government has plans to increase the take-up rate of benefits by launching campaigns to raise awareness and encourage applications.¹²⁸ The impact of these campaigns may affect future expenditure. The Commission will monitor these plans and review the take-up rate assumptions in future forecasts.

¹²⁸ Scottish Government (2017) Call to encourage uptake of benefits ([link](#))

Employability Services

Forecast

Table 4.9: Forecast expenditure on employability services

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Employability services	11	24	27	27	18	3

Source: Scottish Fiscal Commission

Background

- 4.51 Following the devolution of certain employability services under the Scotland Act 2016, the Scottish Government has announced the Fair Start Scotland service will launch in April 2018.¹²⁹ Two transitional services are in operation for 2017-18.
- 4.52 Fair Start Scotland (FSS) is a voluntary service designed to help people with disabilities or who are long-term unemployed find sustained employment. The Scottish Government has contracted external providers to deliver this service. They provide support for volunteers to find and sustain employment. Volunteers are referred mainly by Jobcentre Plus to an employability service provider.
- 4.53 The service is designed around individual customer need and there are three broad categories of service provided: Core, Advanced and Intense. This segmentation reflects the range of circumstances of the people who opt-in. For most participants, pre-employment support is provided for up to 12 months followed by a further 12 months of support in employment, should the participant agree. For participants in the Intense category, who face more significant and complex barriers to employment, there will be an option to extend pre-employment support from 12 to 18 months.
- 4.54 The two transitional services for 2017-18 are Work First Scotland and Work Able Scotland. These help sections of the population who will also be eligible to participate in FSS. Work First Scotland is aimed specifically at people who meet the definition of having a disability under the 2010 Equality Act and who cannot find equivalent support from the DWP employment programs. Work Able Scotland is aimed at people claiming ESA and who are in the Work

¹²⁹ Employability in Scotland website ([link](#))

Related Activity Group. Both programs offer six months pre-employment support and six months support when the volunteer has found work.

Financial background

- 4.55 The FSS service has been allocated a £96 million budget by the Scottish Government to accept referrals over three years. The service will begin on 3 April 2018 and will be delivered across nine regions, based on clusters of Scottish local authority areas, with a maximum contract value allocated to each region. Contracts with providers are for five years.
- 4.56 Providers are paid a portion of their contract as a service fee, which is fixed at 30 per cent of the value of their contract. They receive 50 per cent of the service fee in year one, 30 per cent in year two and 20 per cent in year three. Fees are fixed and spread evenly over each month. Providers were able to ask for a portion of the service fee up front during 2017-18 to support preparation for delivery from April 2018. In the forecast this up-front element amounts to £200,000 in total.
- 4.57 The remaining 70 per cent of the contract value is set aside for performance-related fees. This is to incentivise a high rate of enquiries to conversions, sustained employment outcomes and allocation of resource to the more challenging groups to support. Providers are paid according to the number of people who move into employment and the length of time they're employed. The key milestones are 13 weeks (15 per cent of the maximum fee), 26 weeks (35 per cent of the maximum fee) and 52 weeks (50 per cent of the maximum fee) of sustained employment.¹³⁰ The average maximum fees per person vary by service group. The fee for the Intense group is more than double that of the Core group. This is referred to as a part payment by results model and it means payments to providers will be made over a five-year period.
- 4.58 The service contains financial penalties in the event that a provider fails to achieve any one or more of 16 contracted key delivery indicators.¹³¹ Discretion will be taken on how these are applied and based against clearly set out guidelines. Should the Scottish Government decide that a failure has occurred and should it be established this did not occur for reasons beyond

¹³⁰ The definition of sustained employment allows for a period out of employment. For the 13 week milestone to be met 13 weeks of employment are required in a 16 week period, for the 26 week milestone the corresponding period is 30 weeks and for the 52 week milestone it is 56 weeks.

¹³¹ The Scottish Government set standard delivery outcomes, detailing a list of key delivery indicators they expect the contractors to meet. Delivery indicators include the provision of induction programs for volunteers, setting work support plans and procedures for dealing with complaints all delivered within a specific time.

the provider's control; the provider will be subject to a penalty.

Modelling approach

- 4.59 The forecast model for FSS starts from an estimate of the eligible population.¹³² The estimated size of this population is 76,000 people. From this, an initial take-up rate of 60 per cent is applied, of those who a subsequent 70 per cent are assumed to start the programme. The total number of people expected to start the programme is 38,000. This final figure also included around 6,000 additional starts, made up of non-claimants and ESA support claimants. Based on Scottish Government planning assumptions, it is expected that 14 per cent of referrals will fall into the Core group, 50 per cent will be in the Advanced group and 36 per cent will be in the Intense group.
- 4.60 Further assumptions were made by the Scottish Government. These were: how many people will be referred in each month, how many months it takes them to move into employment following referral and how many key milestones are reached. There is also an assumption made about the proportion of people who fall out of employment and when.
- 4.61 As part of the tendering process, service providers were asked to give their forecasts for the numbers of people they expected to help into employment in each support group. They also gave information about the costs of supporting people in each group through the full service to the 12 month employment outcome and how many people in each group would sustain employment for the 13, 26 and 52 weeks.
- 4.62 The information from the Scottish Government and service providers is combined and used to calculate how much money will be spent per person referred to the service. There are two key assumptions to which the model projections are most sensitive. First is the assumption about the take-up of the service – for a given rate of job conversion by providers, more people volunteering means more participants helped and more money spent. Second is the performance of the providers. More participants helped into sustained employment results in increased performance fees.

¹³² The model was developed for the Scottish Government by the Learning and Work Institute.

Scottish Government policy

- 4.63 Current policy is for the transitional services referral periods to end on 9 March 2018. FSS will take referrals for three years, but contracts with and payments to providers run for five years, from April 2018 to November 2023.

Forecast

- 4.64 Table 4.10 details our forecast of spending for Fair Start Scotland, Work Able Scotland and Work First Scotland. There are three main points to note. First, the forecast spend for Fair Start Scotland is £93 million, slightly under the £96 million budget. This is based on service provider estimates of expected caseloads and sustained job conversions as submitted in their tender proposals. Second, payments peak in the middle of the forecast horizon. This reflects volunteers entering services at a different point as well as the time necessary to enter into employment, and to achieve the key milestones when performance fees are disbursed. Third, payments continue into 2021-22 and 2022-23, which is after the referral period ends. As there will be a number of cases in which participants are referred to the service during the latter part of 2020-21 and then achieve the milestones.

Table 4.10: Forecast expenditure on employability services

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Fair Start Scotland	0.2	17.6	26.9	27.2	18.0	3.3
Work Able Scotland	2.7	0.3	0	0	0	0
Work First Scotland	8.5	5.7	0	0	0	0
Total expenditure	11.4	23.6	26.9	27.2	18.0	3.3

Source: Scottish Fiscal Commission

Forecast uncertainty

- 4.65 The voluntary nature of the service may lead the eventual number of people being referred and then agreeing to participate being lower than expected. Assumptions about take-up have been based on previous DWP schemes, in particular the New Deal for Disabled People. Despite this, the evidence base underpinning this assumption is limited, owing to few comparable previous voluntary schemes. Therefore there is a high degree of uncertainty surrounding estimates of the take-up rate.

- 4.66 The second source of sensitivity for the forecasts is the effectiveness of the service providers at supporting volunteers into sustained employment. This forecast risk is mitigated by a monthly performance monitoring system put in place by the Scottish Government. This means this risk will more likely affect the profile of spending rather than the total amount spent.
- 4.67 A third risk is the effectiveness of the Scottish Government's channels for affecting the performance of the service will only be known several months after the intervention takes place. For example, should the number of people opting into the service be much higher than anticipated, it may be several months before the Scottish Government is able to know whether its intervention to slow the number of referrals has worked. This raises a risk of spending more than anticipated, similarly if the numbers opting in are lower than anticipated there is a risk spending could be lower than anticipated.
- 4.68 An important feature of the service is that the budget is allocated across the nine regions. This means that should referrals or provider performance differ from expectations in any single region, the Scottish Government will manage the overall service budget at a national level to mitigate any risks of over/undershooting the overall £93 million expected spend.
- 4.69 We will continue to monitor expenditure on the service, in particular the assumptions around the risks identified above. These will be reviewed for future forecasts.

Funeral Payments

Forecast

Table 4.11: Forecast expenditure on Funeral Payments

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Funeral Payments	5.1	5.0	5.1	5.1	5.0	5.0	5.1

Source: DWP unpublished outturn data, Scottish Fiscal Commission

Background

- 4.70 Funeral Payments (FP) supports individuals on low incomes with funeral costs.
- 4.71 To receive FP individuals must have been awarded one of the qualifying benefits.¹³³ They must also be responsible for the cost of the funeral.¹³⁴ The amount paid in FP can be recovered by DWP from any assets left by the deceased to the claimant or their family.

Forecast methodology

- 4.72 The forecast for FP is influenced by the complex nature of the benefit, the interactions with qualifying benefits and family relationships. To forecast expenditure on FP in Scotland, we use the ONS population projections to estimate the number of deaths in Scotland over the forecast period.¹³⁵
- 4.73 The number of funerals eligible for FP is then estimated by multiplying the number of deaths by the percentage of funerals eligible for FP. Using results from the Policy Simulation Model (PSM) and information on family relationships from the Understanding Society survey, we assume around 10

¹³³ The qualifying benefits are: Income support (IS), Income based JSA, Income related ESA, Housing benefit, Child tax credits (which includes a child, disabled child or severely disabled child element), Working tax credit (which includes the disabled worker or severe disability element), Pension credit (guarantee or savings credit), Universal credit.

¹³⁴ For more detail, UK government guidance on claiming Funeral Payments [\(link\)](#)

¹³⁵ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland [\(link\)](#)

per cent of funerals are eligible for a payment of FP for 2017-18. This is forecast to fall to nine per cent by 2022-23.¹³⁶

- 4.74 The take-up rate (see Box 4.3) is estimated at 62 per cent based on historical estimates of the eligible population and DWP outturn statistics on expenditure in Scotland. We assume the take-up rate does not change over the forecast period. Multiplying the take-up rate by the number of eligible deaths provides the caseload forecast.
- 4.75 Finally, we assume the average payment rate increases at two per cent per year. This is the average increase in FP in Scotland over the last ten years.

UK Government and Scottish Government policy

- 4.76 The UK Government announced no change to FP at the Autumn Budget 2017. The Scottish Government have announced they plan to replace FP in Scotland with Funeral Expenses Assistance by summer 2019. Our forecasts below are based on current UK Government policy.

Forecast

- 4.77 Expenditure on Scottish FP is forecast to remain around £5 million per year over the forecast horizon. Pension Credit is a qualifying benefit for FP, as the number of Pension Credit claimants falls the proportion of eligible deaths forecast to fall. This is offset by an increase in average payments and an increase in the total number of deaths.
- 4.78 Pension Credit provides a minimum income for individuals (male or female) over the female state pension age. The latest DWP forecasts are for the numbers of FP claimants to fall from 2 million to 1.4 million between 2015-16 and 2021-22.¹³⁷ The decrease is driven by a combination of factors; the introduction of the single tier state pension, and the triple lock on the state pension while Pension Credit only increases in line with earnings.
- 4.79 This is expected to have an impact on payments of FP since pension credit is a qualifying benefit and in 2016-17, at least 34 per cent of GB awards (29 per cent in Scotland) were made to pensioners.

¹³⁶ UK Data Archive Understanding Society survey ([link](#))

¹³⁷ DWP (2017) Benefit expenditure and caseload table Spring Budget 2017 ([link](#))

Table 4.12: Forecast expenditure on Funeral Payments

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Expenditure	5.1	5.0	5.1	5.1	5.0	5.0	5.1

Source: DWP unpublished outturn data, Scottish Fiscal Commission

Uncertainties

- 4.80 There are a number of uncertainties around the forecast of Scottish FP. The uncertainties around Universal Credit and the estimated proportion of individuals in receipt of qualifying benefits are mentioned in Box 4.2. An additional uncertainty for the forecast is on the increase in average payment amounts.
- 4.81 The average amount paid in FP to Scotland has changed year on year by between minus one per cent and plus eight per cent. If the average payment were to grow at a different rate to our estimate (two per cent) this would impact on expenditure. Our forecast currently assumes a constant take-up rate, should there be changes to FP associated with devolution we will review this assumption in our future forecasts.

Healthy Start Vouchers

Forecast

Table 4.13: Forecast expenditure on Healthy Start Vouchers

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Healthy Start Vouchers	4.6	4.3	4.0	3.8	3.8	3.5	3.5

Source: Department of Health unpublished management information, Scottish Fiscal Commission

Background

4.82 Healthy Start Vouchers (HSV) were introduced by the UK Government in 2006 in part to replace the Welfare Food Scheme. Those who qualify for HSV receive weekly vouchers worth £3.10 each. These can be exchanged for milk, fruit and vegetables. The vouchers can be used at registered food outlets or paid directly to claimants who do not live near a registered food outlet.

4.83 Claimants who meet any of the following criteria are entitled to receive HSV:

- People who are entitled to a qualifying benefit, with the exclusion of income related ESA, and have parental responsibility for a child under one year old.
- Children under four years old who live in a household in receipt of a qualifying benefit¹³⁸
- Individuals who are more than 10 weeks pregnant and either under 18 or over 18 and entitled to a qualifying benefit

4.84 The number of vouchers received per week is equal to the number of eligibility criteria met. For example, a mother in receipt of a qualifying benefit with a child who is eight months old will receive two vouchers as they satisfy criteria one and two.

¹³⁸ The HSV qualifying benefits are: income support, income-based JSA, income-related ESA, child tax credit (with a family income of £16,190 or less per year) and Universal Credit (with family take home pay of £408 or less per month).

Model methodology

- 4.85 The forecast for HSV is based on a forecast of the number of successful applicants (caseload) multiplied by voucher value, adjusted to create a yearly figure.
- 4.86 The number of children in Scotland is estimated using population statistics from ONS¹³⁹ (2013 to 2016) and 2016-based population projections.¹⁴⁰ The proportion of these children who live in families in receipt of a HSV qualifying benefit is estimated based on the PSM. This is forecast to fall over the forecast horizon, from 17 to 14 per cent. One explanation is that the income thresholds in the eligibility criteria are frozen in nominal terms, while household incomes are expected to increase. An adjustment is also applied to calculate the number of payments to pregnant mothers.
- 4.87 The eligible population must still apply for the benefit (see Box 4.3 on take-up rates). A take-up rate is calculated by comparing the historic number of payments to the corresponding estimated population eligible. The estimated take-up rate in 2016-17 was 69 per cent. That rate applied across the forecast horizon, resulting in a forecast of number of payments, referred to as caseload.
- 4.88 The caseload is multiplied by the weekly voucher value of £3.10 and aggregated to produce an annual forecast. We then apply an adjustment to account for the number of vouchers which are administered but not used.

Scottish and UK policy changes

- 4.89 HSV are currently administered by the Department of Health but paid for from the Scottish Budget. It is expected HSV will be fully devolved from April 2019 and delivered by the new social security agency. The Scottish Government has announced plans to combine the application process for HSV with the Best Start Grant once both are devolved.¹⁴¹
- 4.90 In 2018-19, HSV remains reserved and the Scottish Government cannot introduce changes. Our forecast assumes HSV continues in line with current

¹³⁹ For 2013-2016 ONS mid-2016 detailed time series ([link](#))

¹⁴⁰ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

¹⁴¹ Scottish Government (2017) Social Security (Scotland) Bill Policy Paper Early Years Assistance (Best Start Grant) Illustrative Regulations and Policy Narrative ([link](#))

UK policy for the forecast horizon in the absence of definitive Scottish policy information.

Forecast

Table 4.14: Forecast expenditure on Healthy Start Vouchers

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Expenditure	4.6	4.3	4.0	3.8	3.8	3.5	3.5

Source: Department of Health management information, Scottish Fiscal Commission.

Forecast uncertainty

- 4.91** Many of the uncertainties around this forecast, such as population projections, take-up rates, devolution and the number of individuals on qualifying benefits are common to all social security forecasts and have been discussed in Box 4.3.
- 4.92** The rollout of Universal Credit may impact on the HSV forecast as HSV has an upper income limit in its eligibility criteria for people in receipt of child tax credit or Universal Credit. Individuals transitioning from child tax credit onto Universal Credit may find their income level alters their entitlement to HSV, as the two thresholds differ slightly.
- 4.93** The Department of Health equality analysis on the transition concluded the numbers eligible for HSV would be largely unchanged following the introduction of Universal Credit.¹⁴² However, the profile of families receiving HSV is likely to change. HSV is expected to be received by a larger number of families who are in work but with lower earnings. This new profile of families may be more or less inclined to claim HSV, which could affect the take-up rate and therefore expenditure.

¹⁴² Department of Health (2016) Healthy Start eligibility and the introduction of an earnings threshold in relation to Universal Credit claimants – Equality Analysis ([link](#))

Sure Start Maternity Grant

Forecast

Table 4.15: Forecast expenditure on Sure Start Maternity Grant

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Sure Start Maternity Grant	2.0	2.6	2.6	2.6	2.5	2.6	2.6

Source: DWP unpublished statistics, Scottish Fiscal Commission

Background

- 4.94** The Sure Start Maternity Grant (SSMG) is a one off payment of £500 to help low income households with the costs associated with having a first child.¹⁴³ To qualify, families must have been awarded at least one of the qualifying benefits.¹⁴⁴
- 4.95** The UK Government introduced SSMG in 1999 as a £200 grant for each child born to parents on qualifying benefits. The grant was offered on the condition that parents received child health advice and their children received regular health check-ups. The payment was increased to £300 in December 2000 and to £500 in June 2002.¹⁴⁵
- 4.96** From April 2011 the UK Government restricted the SSMG to only the first child in a family. An allowance was made for families who have multiple children in one birth (referred to in this document as ‘multiple births’), where they may be eligible to receive additional payments. The UK Government forecast that this policy change would reduce expenditure by 48 per cent.¹⁴⁶

¹⁴³ Link to UK Government’s SSMG webpage ([link](#))

¹⁴⁴ The qualifying benefits are: income support, income based JSA, income related ESA, child tax credit (which includes a child, disabled child or severely disabled child element), pension credit (guarantee or savings credit), working tax credit including the disabled worker or severe disability element or Universal Credit.

¹⁴⁵ House of Commons Library (2011) Standard Note SN/SP/5860 Restriction of the Sure Start Maternity Grant ([link](#))

¹⁴⁶ UK Government June Budget 2010 policy costings ([link](#))

Approach to forecasting

- 4.97 The approach to forecast SSMG is similar to HSV. First, the number of successful applicants (caseload) is forecast. Then this is multiplied by the award amount.
- 4.98 The number of births in Scotland is estimated using population statistics from ONS¹⁴⁷ (2013-2016) and ONS 2016-based projections.¹⁴⁸ This is combined with NHS¹⁴⁹ and NRS¹⁵⁰ birth statistics to estimate the number of first births and the number of multiple births.
- 4.99 Based on analysis from the PSM output, we estimate around 44 per cent of households with children under five are in receipt of qualifying benefits. Applying this to the number of births results in an estimated population entitled to SSMG.
- 4.100 As with many social security benefits the population eligible for SSMG must still apply for the grant, see Box 4.3 on take-up rates. Based on the estimated number of eligible births and number of awards in 2015-16 and 2016-17 the average take-up rate is estimated at around 47 per cent. Applying this figure to the eligible population results in a caseload forecast. Multiplying the caseload by the award amount results in a final forecast of expenditure.

Scottish and UK Government policy changes

- 4.101 The SSMG will be devolved to the Scottish Parliament, and the Scottish Government has announced plans to replace the SSMG with the Best Start Grant by summer 2019.¹⁵¹ The forecast below covers expenditure in Scotland under UK Government policy.

¹⁴⁷ For 2013-2016 ONS mid-2016 detailed time series ([link](#))

¹⁴⁸ ONS (2017) 2016-based Population Projections, 50 per cent EU Migration Variant Population projections Scotland ([link](#))

¹⁴⁹ NHS ISD Births in Scottish Hospitals, year ending 31 March 2017 ([link](#))

¹⁵⁰ NRS 2016 Births, Deaths and Other Vital Events – Preliminary Annual Figures ([link](#)). Table P1b): Population and Vital Events, Scotland, 1971 to 2016.

¹⁵¹ Scottish Government (2017) Social Security (Scotland) Bill Policy Paper: BSG Illustrative Regulations and Policy Narrative ([link](#))

Forecast

Table 4.16: Forecast expenditure on Sure Start Maternity Grant

£ million	2016-17 Outturn	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Expenditure	2.0	2.6	2.6	2.6	2.5	2.6	2.6

Source: DWP unpublished statistics, Scottish Fiscal Commission

Forecast uncertainty

4.102 The uncertainties which are likely to affect the SSMG forecast are general to many of the social security forecasts. In particular, SSMG may be affected by the population projections chosen, the estimates of the proportion of people in receipt of qualifying benefits, the calculation of take-up rates and devolution. For more information on these, see Box 4.2.



Chapter 5

Borrowing

Background

- 5.1 One of the Commission's responsibilities is to assess the reasonableness of the Scottish Government's projections of their borrowing.¹⁵²
- 5.2 We fulfil this role by assessing any borrowing which Ministers can project in advance. Our assessment of the reasonableness will consider the level of borrowing relative to the statutory caps set out in the Scotland Act 2016 and the associated Fiscal Framework.

Borrowing Limits

- 5.3 The borrowing limits agreed are show in Table 5.1.

Table 5.1 – Capital & Resource Borrowing Provisions in the Fiscal Framework

Capital borrowing
Statutory limit increased to £3 billion
Annual limit set at 15% of the overall borrowing cap – equivalent to £450 million a year
Repayment period usually 10 years, longer or shorter repayment periods can be agreed where justified by the life of the assets being purchased through the loan
Resource Borrowing
Statutory overall borrowing limit of £1.75 billion
Annual limit for forecast errors of £300 million Scotland specific economic shock – the annual limit increases to £600 million
Flexible repayment period of between three and five years, decided by Scottish Ministers

Source: The Agreement Between the Scottish Government and the United Kingdom Government on the Scottish Government's fiscal framework ([link](#))

¹⁵² This is set out in section 2(2)(b) of the Scottish Fiscal Commission Act 2016 ([link](#))

Capital Borrowing Assessment

5.4 The Scottish Government's historic borrowing and borrowing plans, along with repayment schedules and cumulative stock of debt are shown in Table 5.2. The information on the borrowing plans up to 2018-19 has been provided to the Commission by the Scottish Government, in addition to the following information on repayment schedules:

- that the 'notional borrowing' undertaken in 2015-16 and 2016-17 would be repaid over 30 years;¹⁵³ and,
- that any subsequent borrowing in 2017-18 and beyond is expected to be repaid over a 25 year time horizon, linked to the life of the assets that are likely to be built. This flexibility on repayment period is built in to the Fiscal Framework.

Table 5.2 Scottish Government Borrowing

£ million	2015-16 Outturn	2016-17 Outturn	2017-18 Plans	2018-19 Plans
Borrowing	283	333	450	450
Repayment on 2015-16 borrowing		9	9	9
Repayment on 2016-17 borrowing			11	11
Repayment on 2017-18 borrowing				18
Total Repayment	0	9	21	39
Debt Stock	283	607	1,036	1,448

Source: Scottish Government. Numbers may not sum perfectly because of rounding.

5.5 We note that:

- The Scottish Government's projected to borrowing is £450 million in 2017-18 and 2018-19, the maximum allowed under the Fiscal Framework rules.
- The Scottish Government's stock of debt is projected to be £1.4 billion in 2018-19, which is below the £3 billion limit set out in the Fiscal Framework.

¹⁵³ Scottish Ministers agreed a notional borrowing arrangement with HM Treasury in 2015-16 and 2016-17 as part of managing the budgetary impact of ONS classification decisions on a number of Non-Profit Distributing (NPD) projects, including the Aberdeen Western Peripheral Route. As a result the amounts shown were recorded against borrowing limits to be notionally repaid over 30 years (linked to the life of the underlying NPD contracts).

- 5.6 Therefore, the Commission judges that the Government's projections of capital borrowing are reasonable, as they comply with the terms set out in the Fiscal Framework.
- 5.7 It can be seen from the table above that the Scottish Government have set out plans to borrow the maximum available in 2017-18 and 2018-19. We note that if this is continued in future years, with a similar repayment schedule, then the borrowing limit would be reached by 2022-23.

Resource Borrowing Assessment

- 5.8 The Scottish Government have confirmed there are no plans for resource borrowing in 2018-19. We are not forecasting an economic shock to allow access to the additional resource borrowing set out in Table 5.1.

Annex A

Policy Costings

Introduction

- A.1** This Annex sets out the methodology underpinning policy costings included in the forecasts produced by the Commission for this report. The material will show the different steps and judgments taken to arrive at our costings of new Government policy proposals.
- A.2** Table A.1 provides a summary of policy costings included in our forecasts.

Table A.1: Measures announced at Draft Budget 2018-19¹⁵⁴

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Income Tax					
Income Tax policy	164	170	178	188	199
Non-Domestic Rates					
Switch to CPI to uprate Poundage	-24	-23	-23	-24	-25
Business Growth Accelerator	-42	-51	-51	-51	-51
Continuation of transitional relief	-15				
Hydro relief	-6	-6	-6	-6	-6
Day nurseries	-6	-6	-6	-6	-6
Expansion of Fresh Start relief	-2	-2	-2	-2	-2
Delaying entry on the roll for unoccupied new builds	-1	-1	-2	-2	-2
LBTT					
Relief for first time buyers	-6	-7	-7	-7	-7
Social Security					
Carer's Allowance Supplement	-35	-30	-32	-33	-34
Overall impact of policy proposals	28	44	51	57	64

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

¹⁵⁴ Negative figures indicate costs to the Scottish Budget, whilst positive figures indicate gains.

Income Tax

Title of measure

Income tax policy

Measure description

A.3 The Scottish Government has proposed to segment the existing basic rate band into three separate bands, and to increase the tax rates applying in the existing higher rate and additional rate bands by one percentage point. Full details of this new five band tax system are set out Table A.2.

Table A.2: Income tax policy measure description (2018-19)

Gross Income (£)	New Categorisation	New Tax rate (%)	Previous Categorisation	Previous Tax Rate (%)
11,850 - 13,850	Starter Rate	19	Basic Rate Taxpayer	20
13,851 - 24,000	Basic Rate	20		
24,001 - 44,273	Intermediate Rate	21		
44,274 - 150,000	Higher Rate	41	Higher Rate Taxpayer	40
Above 150,000	Top Rate	46	Additional Rate Taxpayer	45

Source: Scottish Government

A.4 We are required to produce a forecast including this policy up to 2022-23. The policy parameters provided apply only to 2018-19. Therefore, while not a policy, the Scottish Government suggested a set of assumptions for future years:

- An annual inflation uplift of the Personal Allowance, using the OBR September CPI inflation forecast. This method of uplift is the same approach used by the OBR. This may change if the UK Government commits to increase the Personal Allowance by a different amount.
- All thresholds increase in line with OBR September CPI inflation assumptions; the only exception is the highest threshold, which will be frozen at £150,000.
- No further changes to tax rates for the remainder of the forecast period.

A.5 We judge these to be a suitable set of assumptions for future years.

The cost base

A.6 The cost base is all Scottish income tax taxpayers. Our income tax model produces a detailed forecast of the number of taxpayers, their incomes and their current tax liabilities. Further details of our modelling approach can be found in the income tax section in Chapter 3 and in our ‘Current Approach to Forecasting’ paper.¹⁵⁵ Using a forecast of the distribution of taxpayers and their incomes allows us to produce a forecast of the cost of this policy.

A.7 Table A.3 shows how many taxpayers are expected to be in each band in each year of the forecast based on the results from our income tax model.

Table A.3: Forecast number of Scottish income taxpayers

	2018-19	2019-20	2020-21	2021-22	2022-23
Starter Rate	250,400	254,600	249,700	252,600	251,300
Basic Rate	1,031,300	1,034,500	1,039,500	1,041,700	1,042,500
Intermediate Rate	892,600	902,300	917,600	932,400	950,200
Higher Rate	332,000	337,100	348,200	360,300	374,300
Top Rate	18,900	20,300	21,800	23,500	25,300
Total	2,525,200	2,548,800	2,576,800	2,610,500	2,643,600

Source: Scottish Fiscal Commission

A.8 Over time, the total number of Scottish taxpayers is set to increase, primarily because of demographic changes. We estimate there will be an increase in the number of top, or additional, rate, taxpayers of around 34 per cent. This is mainly a result of fiscal drag. As earnings grow while the additional rate threshold is fixed at £150,000, the share of taxpayers expected to fall into this band increases rapidly over the forecast horizon.

The costing

A.9 The static costing is the cost of the policy assuming that the affected taxpayer population does not change their behaviour in response. This is produced by calculating the change in tax liabilities between the baseline scenario and the policy scenario. For the purposes of illustrating the effects at different bands, we split the baseline scenario into the same five bands. Table A.4 and A.5 detail the thresholds used in both the baseline and policy scenarios.¹⁵⁶

Table A.4: Baseline income tax rates and thresholds

¹⁵⁵ Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

¹⁵⁶ The thresholds in 2018-19 for the basic, intermediate, higher and top rates, are £1 less than detailed in Table A.5. This because of the treatment of thresholds in our modelling.

	2018-19	2019-20	2020-21	2021-22	2022-23
Starter Rate	20%	20%	20%	20%	20%
Starter Threshold (£)	11,850	12,110	12,340	12,590	12,850
Basic Rate	20%	20%	20%	20%	20%
Basic Threshold (£)	13,850	14,154	14,422	14,714	15,017
Intermediate rate	20%	20%	20%	20%	20%
Intermediate Threshold (£)	24,000	24,525	24,982	25,486	26,004
Higher Rate	40%	40%	40%	40%	40%
Higher Threshold (£)	44,273	45,237	46,062	46,985	47,923
Top Rate	45%	45%	45%	45%	45%
Top Threshold (£)	150,000	150,000	150,000	150,000	150,000

Source: Scottish Government

Table A.5: Policy income tax rates and thresholds

	2018-19	2019-20	2020-21	2021-22	2022-23
Starter Rate	19%	19%	19%	19%	19%
Starter Threshold (£)	11,850	12,110	12,340	12,590	12,850
Basic Rate	20%	20%	20%	20%	20%
Basic Threshold (£)	13,850	14,154	14,422	14,714	15,017
Intermediate rate	21%	21%	21%	21%	21%
Intermediate Threshold (£)	24,000	24,525	24,982	25,486	26,004
Higher Rate	41%	41%	41%	41%	41%
Higher Threshold (£)	44,273	45,237	46,062	46,985	47,923
Top Rate	46%	46%	46%	46%	46%
Top Threshold (£)	150,000	150,000	150,000	150,000	150,000

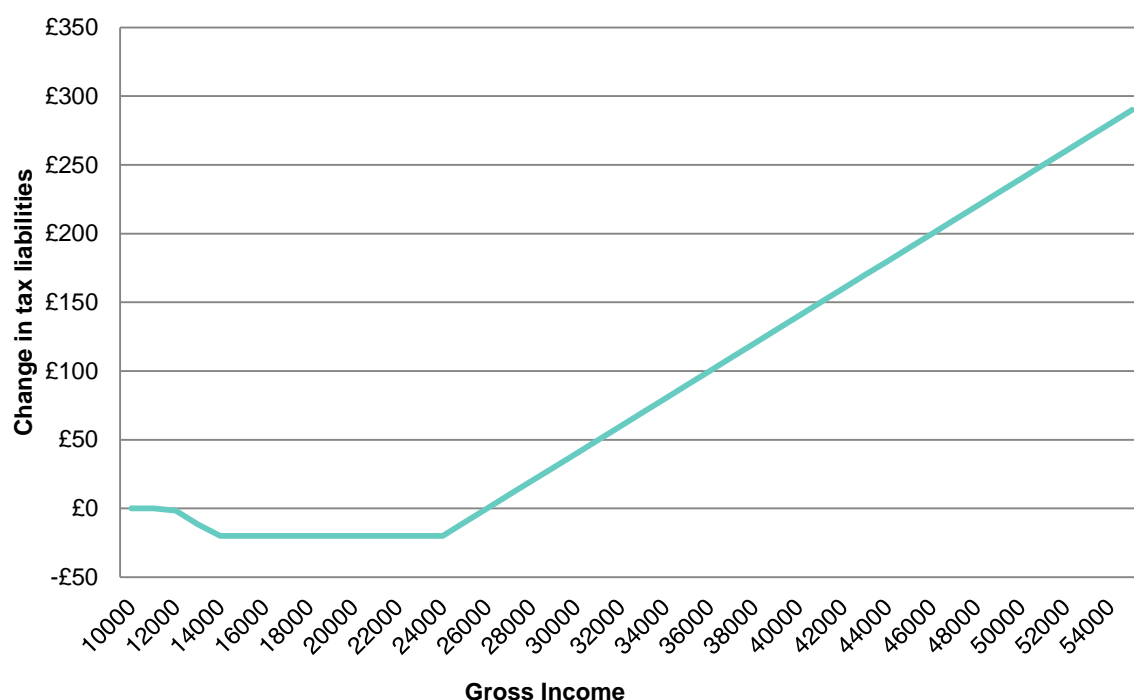
Source: Scottish Government

A.10 We then calculate the impact on income tax liabilities. The figures below detail the effect for individuals from two income groups: individuals with gross income below £55,000 and; individuals with gross income between £55,000 and £200,000.

A.11 In comparison to the baseline scenario, all taxpayers with gross incomes below £26,000, in 2018-19, will see their tax liabilities reduce by a maximum of £20.¹⁵⁷ Taxpayers with gross incomes above this threshold will have higher tax liabilities.

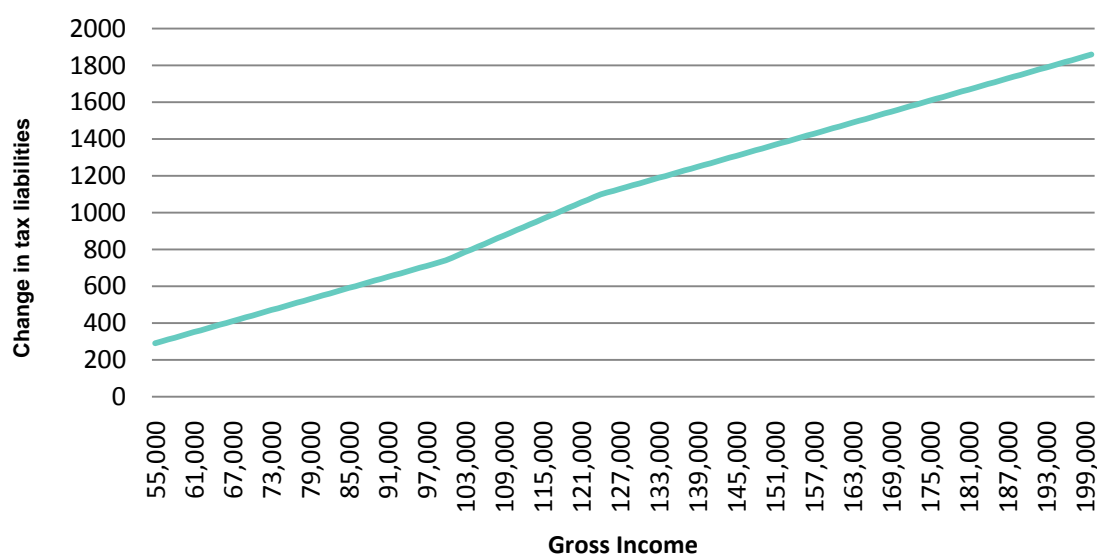
¹⁵⁷ We assume that there are no corresponding interactions with income deductions such as pension contributions.

Figure A.1: Policy impact – gross income up to £55,000



Source: Scottish Fiscal Commission

Figure A.2: Policy impact – gross income from £55,000 to £200,000



Source: Scottish Fiscal Commission

A.12 To calculate the total static cost of this policy measure we combine the individual impacts across the taxpayer distribution. Table A.6 details the static costing by top marginal tax rate.

Table A.6: Static costing of income tax policy

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Starter Rate	-2	-3	-3	-3	-3
Basic Rate	-21	-21	-22	-22	-23
Intermediate Rate	55	57	59	61	64
Higher Rate	131	135	141	148	156
Top Rate	53	56	60	64	69
Static Costing	215	224	235	249	264

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

A.13 The final step is to account for any potential behavioural responses. There are two aspects we consider when evaluating a response to a change in income tax policy: forestalling and taxable income elasticities (TIEs). Both of these are discussed in more detail in Chapter 3.

Forestalling

A.14 Consistent with our forestalling approach in Chapter 3, we have assessed forestalling effects to be negligible for this policy. We will review our forestalling approach once outturn data are available.

Taxable Income Elasticities (TIEs)

A.15 We apply the intensive and extensive TIEs described in Chapter 3 to the taxpayer population and calculate the corresponding behavioural response. Table A.7 details the impact of behavioural change on tax liabilities by tax band. Table A.8 shows the final policy costing including the static costing and the impact of behaviour.

Table A.7: Impact of behaviour on tax liabilities by band

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Starter Rate	0	0	0	0	0
Basic Rate	0	0	0	0	0
Intermediate Rate	-1	-1	-1	-1	-1
Higher Rate	-19	-20	-21	-22	-24
Top Rate	-31	-33	-35	-38	-40
Total Behavioural Impact	-51	-54	-57	-61	-65

Source: Scottish Fiscal Commission.

A.16 The greatest behavioural response comes from those in the higher and top rate bands. We judge that these individuals have the greatest means and incentive to avoid or evade tax.

A.17 Combining the static and behavioural costings results in the final post-behaviour costing shown in Table A.8.

Table A.8: Final Costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Static Costing	215	224	235	249	264
TIE Behavioural Effect	-51	-54	-57	-61	-65
Post-Behavioural Costing	164	170	178	188	199

Source: Scottish Fiscal Commission.

Uncertainties around the costing

A.18 The key uncertainty in the costing is the taxpayer behavioural response. We discussed the evidence around the TIEs in Chapter 3. The behavioural response could be either higher or lower than estimated. We will continue to monitor the available evidence on TIEs. This costing will be updated at future fiscal events.

A.19 The costing is derived from our main income tax forecasting model, using our latest forecasts of Scottish wages and employment. Forecasts for these components are subject to their own uncertainties which may affect the costing presented above.

Non-Domestic Rates (NDR)

Title of measure

Up-rating the poundage with September CPI inflation instead of RPI inflation in 2018-19

Measure description

- A.20** The Scottish Government plans to up-rate the poundage (rate of tax) by CPI inflation instead of RPI in 2018-19. The Government had for planning purposes previously projected that it would make this switch from 2020-21 onwards. This change has only been announced as a one year commitment. Without further information we assume the Government still intends to use RPI inflation in 2019-20 before moving to CPI inflation to up-rate the poundage from 2020-21 onwards. This policy measure will be implemented via secondary legislation laid in the new year.
- A.21** The measure will also affect the forecast cost of NDR reliefs, which are typically up-rated in line with changes to Gross Income¹⁵⁸ or the poundage in our model. The interaction has been factored into all other NDR policy costings presented in this Annex.

The cost base

- A.22** The measure affects the entire NDR tax base, so the cost base is our latest forecast of NDR income.

The costing

- A.23** The costing compares NDR income over our five-year forecast between two scenarios. The first is the Scottish Government's policy baseline, which was to up-rate the poundage by RPI until 2019-20 before switching to CPI. The second scenario matches the Government's commitment to use CPI in 2018-19. Data from ONS are used to calculate the poundage in 2018-19 for both scenarios, with OBR forecasts of RPI and CPI used in subsequent years.¹⁵⁹
- A.24** Comparison between these two scenarios shows NDR income to be £24 million lower in 2018-19 as a result of the move to CPI inflation to up-rate the poundage. This is carried through each year of the forecast.

Table A.9: Up-rating the poundage using CPI inflation in 2018-19 policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Up-rating the poundage using CPI inflation in 2018-19	-24	-23	-23	-24	-25

Source: Scottish Fiscal Commission

¹⁵⁸ Gross income is the tax due from ratepayers before any reliefs are applied.

¹⁵⁹ OBR (2017) Economic and Fiscal Outlook November 2017 ([link](#))

Uncertainties around the costing

A.25 There is a low level of uncertainty attached to this costing as the method of uprating the poundage in 2018-19 uses outturn inflation figures from ONS as opposed to forecasts. The main uncertainty relates to the Scottish Government's policy commitment which has only been announced for 2018-19. We have assumed, in the absence of any further detail, that RPI is still used in 2019-20 to uprate poundage. If this turns out not to be correct and the Government continues to use CPI then the cost of the policy will be significantly higher.

Title of measure

Creation of a Business Growth Accelerator

Measure description

A.26 The Barclay Review proposed the creation of a 'Business Growth Accelerator', whereby a twelve month delay is introduced before rates are applied to a newly built property or increased when an existing property is expanded or improved.¹⁶⁰ The Scottish Government has confirmed it intends to implement this policy from April 2018, with secondary legislation to be laid in the new year. With no stated plans to change the policy we assume it remains in place over our five-year forecast.

The cost base

A.27 The cost base is the Non-Domestic Rates (NDR) income resulting from the increase in rateable value from the construction of new properties and improvements to existing properties. The best estimate we have is from the measurement of growth in the tax base between years as captured on the valuation roll. This has been referred to in past publications as buoyancy.¹⁶¹

The costing

A.28 The Commission has, thus far, been unable to establish a predictive relationship between growth in the NDR tax base and any economic variable.¹⁶² In the absence of a predictive relationship with any economic variable, the long-run average of buoyancy, which is 1.2 per cent, can be used to estimate the contribution that new properties and extensions or improvements to existing properties will have on NDR income in a typical year. This means that on average, the NDR tax base grows by 1.2 per cent as a result of new and enhanced properties. In 2017-18, this is equivalent to £33 million.

A.29 The long-run average of buoyancy will tend to underestimate the effect of construction and improvements to existing properties on rateable value in any given year. The measurement of buoyancy also captures the effect of the demolition of existing properties and the resolution of running roll appeals. These will reduce rateable value but will not reduce the cost of the policy. Specific data do not exist that can be used to remove their effect from the valuation roll.

A.30 Without data to remove the effect of demolitions or running roll appeals from the measurement of buoyancy, an adjustment is made based on their

¹⁶⁰ Barclay Review Group (2017) Report of the Barclay Review of Non-Domestic Rates ([link](#))

¹⁶¹ Scottish Fiscal Commission (2017) Forecast Evaluation Report 2017 ([link](#)) and Scottish Fiscal Commission (2017) Current Approach to Forecasting ([link](#))

¹⁶² See Scottish Fiscal Commission (2016) Report on the Draft Budget 2017-18 ([link](#))

assumed impact. The average deviation around the long-run trend of buoyancy, which is 0.5 per cent, is used to capture the impact that the various factors such as demolitions and running roll appeals can have on buoyancy in a typical year. Increasing the estimated contribution of buoyancy to account for the average deviation should help account for the potential effect of demolitions and running roll appeals. This approach increases the estimated cost of the policy by £13 million.

- A.31** We produce a policy costing for a five-year forecast by uprating the baseline cost in 2017-18 by the poundage (the tax rate) in future years. An additional effect of the policy is also included in the table below. Growth in the tax base partly effects how expenditure on other reliefs is projected forward. New rateable value in 2018-19 will not pay rates as a result of the Business Growth Accelerator. It is therefore necessary to make an adjustment to the method of uprating reliefs so that new rateable value does not affect the uprating of other reliefs in 2018-19, and only has an impact with a one-year lag. Combining these two costings results in a final net cost for this relief.

Table A.10: Business Growth Accelerator policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Impact on uprating other relief	+6	-2	0	0	+1
Business Growth Accelerator	-48	-49	-50	-51	-52
Net cost of Business Growth Accelerator	-42	-51	-51	-51	-51

Source: Scottish Fiscal Commission

- A.32** The introduction of this policy may also lead to a behavioural response affecting the tax base. A lower tax rate for new properties and improvements to existing properties could incentivise construction activity. In turn this could increase buoyancy over and above the historic average. While we recognise the possibility of such an effect, there is insufficient evidence and analysis to enable a robust assessment. Any adjustment for behavioural effects would be as likely to introduce a further source of uncertainty into the costing.

Uncertainties around the costing

- A.33** The main sources of uncertainty relate to the size of the tax base. The valuation roll does not allow for easy identification of either new build properties or changes to existing properties. The large volume of administrative changes made to the roll between years mean that manually inspecting each change to identify those that are 'real' is not feasible. The method of using the long-run average of buoyancy is an imperfect proxy for identifying the cost base for this policy.
- A.34** The evidence base for this policy costing is limited and the margin for error is likely to be large. Once data become available from local authorities relating to

expenditure on this policy, the Commission will look to incorporate this into future forecasts. We will also publish an evaluation of this policy costing.

- A.35 The adjustment of buoyancy for the effect of demolitions and other administrative factors is based on limited evidence and represents a judgement by the Commission on what is thought to be a reasonable level in a typical year. Given the lack of evidence underpinning the adjustment there is scope for a significant error.
- A.36 The effect of buoyancy on NDR income from year-to-year will be highly dependent on the type of properties that are built. For example, a large-scale commercial development could be expected to generate significant NDR income, while the completion of a museum subject to charities relief may generate no NDR income. No modelling of this effect has been undertaken. We have assumed all new rateable value claims relief at the same rate as existing rateable value.
- A.37 No behavioural response as a result of this change has been modelled, but it is possible that the introduction of this relief may incentivise the development of new property and improvements to existing properties above historic levels.

Title of measure

Continuation of transitional relief into 2018-19

Measure description

- A.38** At the 2017-18 Budget the Scottish Government announced transitional relief for the hospitality sector and for offices in Aberdeen and Aberdeenshire following the 2017 revaluation. The relief was set at a 12.5 per cent real terms cap in the Gross Non-Domestic Rates (NDR) bill faced by eligible properties. The Scottish Government has announced this relief will be extended into 2018-19, with the relief again set at a 12.5 per cent real terms cap. In practice this means an eligible property will pay no more than a 33 per cent increase on their 2016-17 NDR bill (compound of two 12.5 per cent caps and the measures of inflation used to uprate the poundage). Hospitality properties with a rateable value above £1.5 million will not be eligible for this relief. These measures will be implemented via secondary legislation brought forward in the new year.
- A.39** Further transitional relief was available in 2017-18 for properties affected by the Woolway vs Mazars case.¹⁶³ In the absence of any continuing commitment by the Scottish Government, we have not included these reliefs in the costing.

The cost base

- A.40** The cost base for this measure has been identified using a snapshot of the valuation roll from April 2017 and matching this to another snapshot from March 2017, prior to the revaluation. We identify properties in the hospitality sector and offices in Aberdeen and Aberdeenshire that have experienced higher than a 33 per cent increase in their NDR bill between 2016-17 and 2018-19. This gives the cost base for the relief, shown in the table below.

Table A.11: Cost base for transitional reliefs

	Number of properties
Hospitality sector	5,070
Aberdeen/Aberdeenshire offices	422

Source: Scottish Fiscal Commission

The costing

- A.41** The cost of the relief is the cost of capping the change in gross bills between 2016-17 and 2018-19.¹⁶⁴ For the properties identified above, we estimate a

¹⁶³ Woolway (Appellant) v Mazars (Respondent) UKSC 53 ([link](#))

¹⁶⁴ Gross bills are the bills faced by ratepayers before any reliefs are applied.

cost of £0.8 million for offices in Aberdeen and Aberdeenshire and £21.9 million for the hospitality sector. This is further adjusted to reflect the various factors that will affect expenditure on the transitional relief.

- A.42** First, an adjustment is required to reflect the eligibility of a number of properties identified in the cost base for other reliefs. We use the billing system, which is a data source maintained by the Scottish Government listing all properties claiming the various NDR reliefs available. The most recent quality-assured version of this dataset is from 2016. Incorporating this information reduces the cost of the transitional relief by £0.4 million for the hospitality sector. There is a negligible effect on the cost of the relief for offices in Aberdeen and Aberdeenshire.
- A.43** A second adjustment is required to take account of EU State Aid rules, which limit expenditure on transitional relief. While it is not possible to account fully for this with the data available, adjustments are made to limit the amount of relief individual properties claim at the maximum amount allowed under State Aid rules, known as the de minimis limit.¹⁶⁵ This will underestimate the true impact of State Aid limits on relief expenditure as some of the properties below the de minimis limit will have the same ownership. It is not possible to account for this in the costing with the data available. Adjustments for State Aid on a property-by-property basis result in the costing for the hospitality sector being reduced by £2.4 million. For offices in Aberdeen and Aberdeenshire, the reduction is £0.01 million.
- A.44** A final assumption is required relating to the likely take-up rate for the relief. Mid-year estimates for the 2017-18 transitional relief reported by local authorities indicate that take up has been relatively low, although there are uncertainties around the reliability of these data. We use the mid-point between take-up reported in the local authority mid-year estimate for 2017-18 scheme and 100 per cent take-up. The result is a take-up assumption of 77 per cent for the hospitality sector and 83 per cent for offices in Aberdeen and Aberdeenshire.
- A.45** The final policy costing for 2018-19 is shown below.

Table A.12: Transitional relief policy costing

£ million	Final Policy Costing 2018-19
Hospitality sector	-14.7
Aberdeen/Aberdeenshire offices	-0.7
Total transitional relief	-15.4

Source: Scottish Fiscal Commission

¹⁶⁵ See Official Journal of European Union, Commission Regulation (EU) No 1407/2013 ([link](#))

Uncertainties around the costing

- A.46 There are two main areas of uncertainty. We are unable to account fully for number of properties that will be ineligible for transitional relief because of EU State Aid rules. This is because there are insufficient data available. The cost of the reliefs may, therefore, be lower than our estimates.
- A.47 The take-up rate for the relief is the other major source of uncertainty, see Box 4.3. While current information on take-up for 2017-18 relief is not fully reliable, it does suggest the rate could be lower than assumed here. The Commission will monitor outturn data once available and publish an evaluation of this costing in a later publication.

Title of measure

Introduction of a new relief for Hydro schemes

Measure description

A.48 The Scottish Government has announced the introduction of a new 60 per cent relief for Hydro schemes. This will be implemented in April 2018 via secondary legislation brought forward in the new year and be restricted to schemes with a rateable value below £5 million. It follows a transitional relief scheme for Hydro properties in 2017-18.

The cost base

A.49 The cost base is all Hydro schemes in Scotland with a rateable value below the threshold of £5 million. This has been identified based on entries on the valuation roll. We identified 253 hydro entries with a rateable value below the relief threshold of £5 million.

The costing

A.50 The Gross Bill faced by the cost base is calculated at £13.0 million in 2017-18.¹⁶⁶ Applying the 60 per cent relief to the Gross Bill faced by these entries on the roll results in an estimated cost of the policy of £7.8 million.

A.51 The costing is reduced to take account of properties already in receipt of other reliefs. We use a dataset maintained by the Scottish Government known as the billing system, which contains a record of all properties in receipt of a relief in a financial year. Matching information from this dataset onto the cost base results in a reduction in the costing of £0.3 million.

A.52 We make a second adjustment to take account of EU State Aid de minimis limits.¹⁶⁷ While a limited number of the schemes identified are affected by this issue it reduces the cost of the policy by an estimated £1.9 million. Combining the adjustments for other relief entitlement and EU State Aid limits results in a cost estimate of £5.6 million for the policy.

A.53 A final assumption is required to account for the likely take-up rate for this new relief. In the absence of any additional evidence it is assumed that the take-up

¹⁶⁶ Gross bills are the bills faced by ratepayers before any reliefs are applied.

¹⁶⁷ The maximum amount of relief allowed under State Aid rules is known as the de minimis limit. See Official Journal of European Union, Commission Regulation (EU) No 1407/2013 ([link](#))

is 100 per cent. In practice the take-up rate is likely to be lower however we balance this against the risk that the number of Hydro schemes is likely higher than identified on the roll.

- A.54** The baseline cost of the relief in 2017-18 is uprated in line with changes to Gross Income to calculate the cost of the policy over each year of our forecast.

Table A.13: Hydro relief policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Hydro relief	-5.6	-5.8	-5.9	-6.1	-6.2

Source: Scottish Fiscal Commission

- A.55** No additional behavioural effects have been modelled as part of this costing. The introduction of this relief could incentivise Hydro developments, but there is uncertainty around the review of Plant and Machinery valuations recommended by the Barclay Review. The introduction of the relief is therefore unlikely that there will be any significant behavioural response.

Uncertainties around the costing

- A.56** The main uncertainties with this costing relate to the identification of the cost base on the valuation roll. This has been done manually and is subject to a degree of error, with evidence from other sources suggesting the number of schemes in operation could be higher than identified.¹⁶⁸ If the number of schemes has been under-identified the cost of the policy may be higher.
- A.57** The 100 per cent take-up rate assumption used here will be higher than in practice. Given the likelihood that the number of Hydro schemes has been under-identified in this costing, these effects may balance out to produce a broadly central costing.

¹⁶⁸ For example, The Department for Business, Energy and Industrial Strategy has indicated a total 464 Hydro schemes operated in Scotland in 2016 ([link](#))

Title of measure

Creation of a new 100 per cent relief for day nurseries

Measure description

A.58 The Barclay Review proposed the creation of a new 100 per cent relief for day nurseries to support the provision of childcare. The recommendation has been accepted by the Scottish Government and will be implemented from April 2018. The exact criteria for properties claiming this relief will be set out in secondary legislation to be laid in the new year by the Scottish Government. It is understood that the relief is intended to be targeted only for properties where the principal use is the provision of childcare.

The cost base

A.59 The tax base for this relief has been identified based on entries on the valuation roll with a core description of 'day nursery'. This approach identifies 957 entries on the roll with a total rateable value of £22.9 million and a Gross Bill of £10.8 million in 2017-18.¹⁶⁹ The cost for 2017-18 is then adjusted to calculate the cost in each of the five years of the forecast.

The costing

A.60 The cost is estimated based on Gross Bills for day nurseries in 2017-18 adjusted to take account of relief entitlement. Billing system data on properties claiming the various NDR reliefs from 2016 is used to adjust for relief entitlement.

A.61 The Gross Bill faced by Day nurseries in 2017-18 is first adjusted for all relief schemes other than the Small Business Bonus Scheme (SBBS). We assume the ratio of non-SBBS relief to Gross Bills that existed in 2016 is the same in 2017-18.¹⁷⁰ This results in an estimated £0.9 million reduction to the Gross Bill for day nurseries in 2017-18. A further adjustment is made to reflect the proportion of day nurseries that will claim under the SBBS. Properties below the SBBS threshold are identified using the snapshot of the roll from April 2017. The assumed percentage of properties that will claim SBBS is calculated using the 2016 billing system and a snapshot of the roll from the same year. This further reduces the estimated Gross Bill faced by day

¹⁶⁹ Gross bill is the tax bill faced by ratepayers before any reliefs are applied.

¹⁷⁰ The most common non-SBBS relief claimed by day nurseries identified on the billing system in 2015 is charitable relief.

nurseries by £3.3 million giving an estimated final net bill in 2017-18 for day nurseries of £6.6 million.

A.62 A final assumption is required relating to likely take-up rates for this new relief. The limited evidence available suggests take-up rates for relief for small businesses was 85 per cent in 2009-10.¹⁷¹ The majority of the day nurseries identified have a small rateable value; we judge that the 85 per cent take-up rate is a reasonable assumption.

A.63 After applying the take-up rate assumption, the baseline cost estimated for 2017-18 is uprated in line with the Commission's forecast of Gross Income to calculate the cost of the policy over our five-year forecast.

Table A.14: Day nurseries policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Day nurseries	-5.7	-5.9	-6.0	-6.2	-6.4

Source: Scottish Fiscal Commission

Uncertainties around the costing

A.64 The main uncertainty relating to this costing is the reliability of the valuation roll to accurately capture the tax base that will be eligible for the relief. It is possible that the number of properties eligible for this relief will be larger than identified in this costing. A number of nurseries currently included within a larger entry for a school or office on the valuation roll may attempt to get a separate entry to claim eligibility for the relief. No modelling of this potential issue has been included in the costing due to data limitations.

A.65 The second source of uncertainty is the size of any behavioural response from ratepayers to the introduction of this relief. While we recognise the possibility of such an effect, there is insufficient evidence and analysis to enable a robust assessment. Any adjustment for behavioural effects would be as likely to introduce a further source of uncertainty into the costing.

¹⁷¹ See Scottish Government (2010) Full report on the estimates of the take-up of business rates relief schemes for small business properties in Scotland for 2009-10 ([link](#))

Title of measure

Expansion of Fresh Start relief

Measure description

- A.66 The current Fresh Start relief offers a 50 per cent rates discount for the first year of occupation for properties that have been claiming empty property relief for at least one year.
- A.67 The Barclay Review recommended expansion of Fresh Start.¹⁷² The Scottish Government has confirmed it will increase the level of relief available to 100 per cent while also halving the minimum time the property must be empty from one year to six months. Additionally, the relief will now be available for all properties instead of only properties formerly shops, offices, pubs, hotels and restaurants as offered previously. The Government has confirmed it intends these changes to be implemented from April 2018, with secondary legislation to be laid in the new year.

The cost base

- A.68 The cost base for this measure is the total Gross Bill faced by properties that have been claiming empty property relief for at least six months.¹⁷³ Specific data are not available, so the latest known expenditure on current Fresh Start is used as basis for estimating the cost base. In 2017-18 this is £0.5 million. Several adjustments are made to calculate the cost base to account for the expansion of the relief.

The costing

- A.69 The latest estimated expenditure on Fresh Start is first adjusted to reflect the widening of eligibility to all properties. Billing system data on properties claiming empty property relief for at least three months is used to estimate the percentage increase in the number of eligible properties, resulting in an increase to the cost of £0.3 million. We double the figure to reflect that the level of relief now offered is set at 100 per cent instead of the previous 50 per cent.
- A.70 The final step in the costing adjusts for the reduction in the minimum time empty from twelve months to six months. This step uses billing system data

¹⁷² Barclay Review Group (2017) Report of the Barclay Review of Non-Domestic Rates ([link](#))

¹⁷³ Gross bill is the tax bill faced by ratepayers before any reliefs are applied.

on the estimated percentage of properties empty for more than twelve months, and the percentage empty for less than three months. These are combined to calculate an estimate of the percentage increase in properties eligible for Fresh Start. The final policy costing is £1.7 million.

- A.71** The baseline cost estimated in 2017-18 is uprated in line with our forecast of Gross Income to arrive at a policy costing over the five-year forecast.

Table A.15: Fresh Start policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Fresh Start	-1.7	-1.7	-1.8	-1.8	-1.9

Source: Scottish Fiscal Commission

- A.72** No additional behavioural effects have been modelled as part of this costing, but it is possible the increase in the generosity of the relief will result in greater numbers of previously empty property being brought back into use. While this is a possibility, there is insufficient evidence and analysis to enable a robust estimate of any potential behavioural response from the tax base. Given the size of the costing estimated here any behavioural effect introduced by the expansion of the relief should be relatively marginal in the context of the costing and the overall NDR forecast.

Uncertainties around the costing

- A.73** There are two main uncertainties associated with this costing. The cost base is estimated using an imperfect proxy for the increase in number of properties that will be eligible to claim this relief. Additionally, if the measure results in greater numbers of empty properties brought back into active use, there is scope for the actual cost of the relief to be greater than estimated here.

Title of measure

Delaying entry on the roll for new build properties until occupied

Measure description

A.74 The Government has announced that from April 2018 new build properties will no longer be entered onto the valuation roll by Assessors until occupied. It is expected that Assessors will initially use pre-existing powers to delay entry on the valuation roll. The details of this measure are still to be laid out in guidance by the Government. It is understood that it will apply to new buildings but not to buildings with a newly constructed outer shell.

The cost base

A.75 The cost base for this policy is all new entries onto the valuation roll within a twelve month period where the property is vacant. We use the billing system data source, which contains a record of all properties in receipt of Empty Property relief or New Start relief in a financial year. This information is matched to snapshots of the valuation roll for properties with an effective date within twelve months of the billing system snapshot. This approach identifies 335 properties.

The costing

A.76 The Gross Bill faced by the cost base is calculated at £3.1 million in 2018-19.¹⁷⁴ To calculate the additional cost resulting from the introduction of this measure, an adjustment is needed to reflect the level of relief already awarded through Empty Property relief and New Start. This reduces the Gross Bill faced by these properties by £1.7 million.

A.77 The baseline cost is uprated by Gross Income to give a final policy costing over our five-year forecast.

Table A.16: Delaying entry on the roll for unoccupied new builds policy costing

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Delaying entry on the roll for unoccupied new builds	-1.4	-1.5	-1.5	-1.5	-1.6

Source: Scottish Fiscal Commission

¹⁷⁴ Gross bill is the tax bill faced by ratepayers before any reliefs are applied.

A.78 The introduction of the policy may also lead to a behavioural response affecting the tax base. The measure will reduce the rates liability for new build properties but is an incremental increase in the generosity of relief available to vacant new builds already available through Empty Property and New Start reliefs. While we recognise the possibility of this incentivising new construction, any possible behavioural effect is likely to be small when viewed in the context of the policy costing. There is insufficient evidence and analysis to enable a robust assessment.

Uncertainties around the costing

A.79 The main uncertainty for this costing relates to the identification of the cost base. With no easy way of identifying empty new build properties on the valuation roll, the method used has had to rely on information on new additions to the valuation roll claiming certain reliefs. This risks underestimating the cost base as not all new empty properties will claim the relief they are entitled to. There is also a risk that some of the new build properties identified in this costing are not new but represent administrative changes made to the roll by assessors. Producing an evaluation of this policy costing will be challenging as the value of this measure will not be reported on a routine basis.

Land and Buildings Transactions Tax

Title of measure

Land and Buildings Transactions Tax Relief for First Time Buyers

Measure description

- A.80** Residential Land and Buildings Transactions Tax (LBTT) is payable upon purchase of a residential property which is valued above £145,000. Tax rates are applied only to the portion of the home purchase price that falls into each tax band. Currently, the first £145,000 is taxed at 0 per cent.
- A.81** The Scottish Government has announced a relief for First-Time Buyers (FTBs) up to £175,000. This relief raises the zero tax threshold from £145,000 to £175,000 just for FTBs. The policy will come into effect from 1 June 2018.

The cost base

- A.82** UK Finance (UKF) provides information on the number of FTB purchases with a mortgage in each house price band in Scotland.¹⁷⁵ These will represent the majority of FTB purchases in the market. There will be a small proportion of FTBs making cash purchases. In the absence of a published statistic for the proportion of cash FTBs in Scotland, we use the English Housing Survey estimate of 6 per cent.¹⁷⁶
- A.83** This results in an estimated 33,600 FTB transactions in Scotland in 2016 ranging from £0 to £500,000 in value.

Table A.17: Estimated size of the first time buyer market

	0 - £125K	£125K- £175K	£175K- £250K	£250- £500K	> £500K	Total
UKF Loans	16,500	8,700	4,800	1,600	0	31,600
Cash buyers	1,100	600	300	100	0	2,000
Share of FTB transactions	52%	28%	15%	5%	0%	100%

Source: Scottish Fiscal Commission and UK Finance ([link](#)). Bands do not sum due to rounding.

¹⁷⁵ UK Finance New mortgage lending tables, Scotland ([link](#))

¹⁷⁶ Department for Communities and Local Government English Housing Survey First Time Buyers, 2015-16 (Page 14, paragraph 3.4) ([link](#))

- A.84 We estimate that a third of the FTB market would be affected by this measure (12,000 FTBs a year). This is just under 10 per cent of the overall market.¹⁷⁷ The remaining FTB transactions (around 22,000 FTBs a year) are below the £145,000 zero rate tax threshold and therefore do not pay LBTT.
- A.85 Of the 12,000 FTBs affected by the tax change, 7,000 will pay £600 less in tax (as their transaction value is above £175,000). The other 5,000 save on average £290. The change in the tax paid as a proportion of value of the purchase price (also known as the effective tax rate) is modest for most FTBs.

The costing

- A.86 We use the information from the UKF to estimate the number of FTB transactions in each price band. We apply the new zero tax threshold of £175,000 to the FTBs and compare the effective tax rates under the old and new systems. This allows us to measure the impact of the new policy on prices, transactions and revenues, taking account of how buyers and sellers react to changes in the effective tax rate (the behavioural effects).

Impact on transactions

- A.87 To measure the impact of the policy on transactions, we multiply the change in effective tax rate by a number that captures the change in buyer and seller behaviour as a result of the change in tax. This number is known as a semi-elasticity. We use OBR/HMRC semi-elasticity estimates for the UK.¹⁷⁸ These are the best available estimates. The Commission will continue to assess their suitability and engage in further analysis as required.
- A.88 We estimate that FTB transactions increase by between 150 and 200 transactions a year. The estimated increase is consistent with HMRC analysis of the March 2010 to March 2012 temporary stamp duty relief for FTBs up to £250,000 which found that the relief increased FTB transactions by between zero and one per cent.
- A.89 The policy targets a subset of the market. It does not affect the supply of properties coming onto the market over and above what would already have been the case absent the change. The HMRC costing of the November 2017 change to UK Stamp Duty Land Tax for FTBs is based on the same rationale.

¹⁷⁷ Based on the UKF distribution, cash estimates and Commission forecasts for the market distribution of residential transactions.

¹⁷⁸ OBR elasticities for prices and transactions are applied, discussed further below. See OBR Supplementary forecast information release 10 October 2017 ([link](#))

As a result, the increase of between 150 and 200 FTB transactions only displaces other transactions.

A.90 In our costing, half of the displaced transactions are additional property transactions, for example buy to let, and the remainder are home movers.

Impact on FTB house prices

A.91 FTBs have additional money available up front to put towards the house purchase as a result of the relief. This increase in funds, in response to the relief, results in FTBs being able to bid more for a property, this is known as price capitalisation.

A.92 Similar to how the change in transactions was measured, we apply a semi-elasticity of between -1 and -2.25 to the percentage point change in the effective tax rate, depending on the value of the property. This produces an estimate for the rate of growth in house prices. Lowering the effective tax rate by 1 percentage point raises the house price by between 1.5 per cent and 2 per cent. There are two reasons for this:

- FTBs tend to buy with mortgages. The relief means the FTBs can potentially put more towards the deposit and access a larger mortgage for a given loan to value ratio. Alternatively FTBs could use the additional money to offer a larger amount over the valuation of a property rather than increasing the amount borrowed.
- For a given property, there is an effective reduction in tax on both the immediate and future transactions that involve a FTB. Price capitalisation in this context refers to the price changing to reflect the present discounted value of the tax relief both on current and future transactions.

A.93 A £175,000 transaction would face an effective tax rate of 0.26 per cent before the relief. The introduction of the relief will reduce the effective tax rate by -0.26 percentage points (to zero). Combining this with a semi-elasticity of -2.14 means the house price increases by 0.56 per cent (£974) to £175,974. For a home costing £145,000 or less, there is no change in tax rate (zero per cent before and zero per cent after relief) so the transacted price is unaffected.

Impact on residential market average house prices

A.94 The impact of the relief on the market average house price will not be the same as the impact on FTBs house prices. This is because buyers such as home movers and buy-to-let landlords will not face a change in tax paid. Affected FTB transactions are 10 per cent of the whole market and given the modest scale of the effective tax rate change, the impact on the market

average house price will be small. We estimate that the market average house price rises by 0.05 per cent.

Table A.18: Market average prices (includes all home buyer types)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Price Pre Measures (£)	176,432	179,642	183,104	186,676	190,339	194,084
Price Post Measures (£)	176,432	179,710	183,211	186,772	190,436	194,183
Price increase (£)	0	68	108	96	97	99
Price increase	0.00%	0.04%	0.06%	0.05%	0.05%	0.05%

Source: Scottish Fiscal Commission

Impact on LBTT revenue raised

A.95 The FTB relief has a direct impact on revenues as a new threshold is applied to FTBs. In the absence of behavioural effects there will be a direct change in revenue also known as static costing. Table A.19 presents the static and behavioural impact of the FTB relief on both Residential LBTT and ADS revenues.

A.96 We use the estimates of the new average price and the increase in FTB transactions to calculate the change in residential LBTT revenue because of the behavioural response of buyers. The estimate of the number and price of additional property purchases displaced allows us to calculate the reduction in ADS revenues. We make a small adjustment to the calculation for 2018-19, to reflect the fact that the policy comes into effect on 1 June 2018, two months after the start of the financial year.

Table A.19: Residential LBTT and Additional Dwelling Supplement final costing, including behavioural effects

£ million	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Residential static costing	0.0	-6.5	-6.6	-6.8	-7.0	-7.2
Residential behavioural effect	0.0	1.2	0.2	0.2	0.2	0.1
Residential LBTT total cost	0.0	-5.3	-6.4	-6.7	-6.9	-7.1
ADS static costing	0.0	0.0	0.0	0.0	0.0	0.0
ADS behavioural effect	0.0	-0.3	-0.3	-0.3	-0.3	-0.3
ADS total cost	0.0	-0.3	-0.3	-0.3	-0.3	-0.3
Total cost	0	-6	-7	-7	-7	-7

Source: Scottish Fiscal Commission, Figures may not sum to totals because of rounding

Forestalling

A.97 The Commission's view is that while forestalling is a possibility we expect very little of this activity and not of a scale we can meaningfully cost. The maximum gain to a FTB is £600. This is smaller than the gain seen by many purchasers of similarly priced properties following the introduction of LBTT. There is little evidence of forestalling in the lower price bands from that event. In fact, transaction volumes below £325,000 increased between February and March 2015, the opposite of what would be expected given an impending tax reduction for some buyers in this band. The median deposit for a FTB in Scotland is £17,000.¹⁷⁹ Given buyer behaviour during previous policy changes, a £290 addition, which is the average gain an affected FTB might accrue from the relief, is unlikely to be of a large enough scale to significantly alter the timing of purchases.

Uncertainties around the costing

A.98 There is uncertainty about the extent of the behavioural response to the policy change. The analysis uses OBR elasticities for the UK. We judge that these are relevant for Scotland in the absence of Scottish specific elasticities. We note that the OBR places a high degree of uncertainty around these estimates and agree with this judgement. The Commission will continue to monitor and update these estimates as further data become available. We will explore the possibility of developing Scottish specific elasticities although note the limited evidence base with which to do so.

A.99 It is possible there will be second round impacts on prices and transactions in the wider market. There are no available data on the number and length of property chains linked to each FTB transaction for Scotland or for the rest of the UK. To the extent that each additional FTB transaction leads to the formation of an additional property chain, our costing will not take account of any additional tax raised.

A.100 There is uncertainty about the size of the tax base. There are currently no published estimates of the share of cash FTBs in Scotland. We use the English Housing Survey estimates as a proxy. The Scottish estimate may be different, which could change the estimated number of FTBs in the Scottish market. In addition the definition of a first time buyer in the UKF data is not an exact match with the definition used in the relief. The Scottish Government definition is that the purchaser may not have ever previously owned a property. In contrast, the UKF data count FTBs as those who have not owned a property for a certain period of time.

¹⁷⁹ Scottish Fiscal Commission using data from UKF industry data table ML2R. Figures are calculated based on 2016 shares.

A.101 The Commission has run sensitivity analysis around the above uncertainties. It shows that the costing presented here is robust to a number of reasonable variations in our assumptions. This does not negate the uncertainty around the costing figures presented.

Social Security

Title of measure

Introduction of a supplement to raise the level of Carer's Allowance (CA) to that of Jobseeker's Allowance (JSA)

Measure description

- A.102** The Scottish Government published a policy position paper in October 2017 which outlines their strategy to provide support for carers.¹⁸⁰ The paper details the intention to increase the CA weekly rate to match the rate of JSA. In 2018-19 this would equate to an increase from £64.60 to £73.10 per week.¹⁸¹ Our forecast is illustrative of this policy until we receive firm details from the Scottish Government.
- A.103** Prior to CA being administered by the Scottish social security agency, it will continue to be administered by the Department for Work and Pensions (DWP) on a weekly basis at the rate set by the UK Government. The Scottish Government's Social Security (Scotland) Bill provides for a supplement to be paid to recipients of CA in Scotland, to make up the difference between the rates of CA and JSA.¹⁸²
- A.104** The supplement will be paid as two lump sums per financial year, each worth six months of the difference between CA and JSA. For each lump sum, a specified qualifying date will be set and everyone in receipt of CA on that date will receive the full six month lump sum.
- A.105** The eligibility dates have yet to be chosen. These will have a small impact on the forecast as the caseload increases over time; earlier eligibility dates in the year would result in lower expenditure. While these dates are still in discussion, it is not possible for us to incorporate them in our forecasts.
- A.106** As a result, we have decided to provide an illustrative forecast, which assumes that all CA recipients receive the supplement each week commencing 1 April 2018. The costing is based on current UK Government policy and assumes the continued administration of CA by DWP. Once the eligibility dates have been determined, we will incorporate them into future forecasts.

¹⁸⁰ Scottish Government (2017) Support for Carers: policy position paper ([link](#))

¹⁸¹ There are several different JSA rates. The income based JSA rate for over 25's is £73.10 and CA will be increased to this figure for all carers.

¹⁸² Social Security (Scotland) Bill ([link](#))

The cost base

A.107 Expenditure will be based on the number of eligible CA claimants and the subset of these who are receiving payment (caseload). Our forecast of the caseload from Chapter 4 is used in the costing.

Illustrative costing

A.108 As the eligibility dates have yet to be specified, we have provided an illustrative cost of the CA supplement, beginning on 1 April 2018 and based on the assumption that the Supplement is paid weekly.

A.109 Our forecast for JSA rates takes account of the UK Government's freeze of many working-age benefits.¹⁸³ JSA is frozen at £73.10 until 2019-20, thereafter it is uprated each year in line with the OBR's CPI inflation forecast.¹⁸⁴ CA continues to be uprated annually in line with CPI inflation from the preceding September and will increase to £64.60 in 2018-19.¹⁸⁵

A.110 Table A.20 details the future JSA and CA rates. The difference between the two is the weekly supplement value.

Table A.20: Forecast rates for JSA, CA and CA Supplement

£	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
JSA Rate	73.10	73.10	73.10	74.40	75.90	77.40
UKG CA Rate	62.70	64.60	66.00	67.20	68.55	69.90
Weekly Supplement	10.40	8.50	7.10	7.20	7.35	7.50

Source: Scottish Fiscal Commission, UK Government's proposed benefit and pension rates for 2018-2019 ([link](#)) and rates for 2017-18 ([link](#))

A.111 The forecast weekly rate of the supplement is applied to the expected caseload. A three per cent adjustment factor is then applied to account for differences between historic forecasts and actual expenditure, as detailed in Chapter 4. The illustrative cost per year is displayed in Table A.21.

Table A.21: Forecast expenditure on CA Supplement

£ million	2018-19	2019-20	2020-21	2021-22	2022-23
Amount spent on Supplement	35	30	32	33	34

Source: Scottish Fiscal Commission

¹⁸³ UK Government Summer Budget 2015: policy costings ([link](#))

¹⁸⁴ OBR(2017) Economic and Fiscal Outlook, November 2017 ([link](#)). Table 4.1, CPI Forecast.

¹⁸⁵ DWP (2017) Proposed benefit and pension rates 2018 to 2019 ([link](#))

A.112 The cost of the supplement falls from 2018-19 to 2019-20 as JSA remains frozen at £73.10 while CA continues to increase in line with CPI inflation. In subsequent years, JSA is also uprated in line with CPI which accounts for the increase in the cost of the supplement from 2020-21 onwards.

Costing uncertainties

A.113 Some of the general uncertainties affecting our social security forecasts, detailed in Box 4.2 in Chapter 4, apply to the CA supplement.

A.114 Expenditure on the CA Supplement depends on the value of the weekly payments for JSA and CA, any changes in inflation compared to the OBR forecast, or UK or Scottish Government policy will have a direct impact on our expenditure forecast.

A.115 CA will initially continue to be administered by DWP. As there are no changes to the administration of the main CA benefit or the eligibility criteria we assume that the introduction of the CA Supplement has no impact on the take-up rate, and therefore, caseload for CA. See Box 4.3 in Chapter 4 for more information on take up rates. The arrangements for responsibility for administration of CA transferring to the Scottish agency are not yet known; therefore any impacts are not incorporated in our forecast.

A.116 A further reason for the assumption of no change in the caseload is the long-term status of carers. A decision to exit the labour market to care for a family member will likely be a long-term decision and unlikely to be influenced by a small increase in the weekly amount. We will continue to monitor this assumption for future forecasts.



Abbreviations

ADS	Additional Dwelling Supplement
ALEOs	Removing award of charitable relief to council run arms length external organisations
CA	Carer's Allowance
CPI	Consumer Price Index
DHP	Discretionary Housing Payment
DWP	Department for Work and Pensions
ESA	Employment and Support Allowance
FP	Funeral Payments
FSS	Fair Start Scotland
GDP	Gross Domestic Product
GERs	Government Expenditure & Revenue Scotland
HMRC	Her Majesty's Revenue and Customs
HSV	Healthy Start Vouchers
JSA	Jobseeker's Allowance
LBTT	Land and Buildings Transaction Tax
LHA	Local Housing Allowance
MCC	Material Change of Circumstances
NDR	Non-Domestic Rates
NHS	National Health Service
NPV	Net Present Value
NRS	National Records of Scotland
OBR	Office for Budget Responsibility
ONS	Office for National Statistics
PSM	Policy Simulation Model
RPI	Retail Price Index
RV	Rateable Value
RSRS	Removal of the Spare Room Subsidy
SAA	Scottish Assessors Association
SDLT	Stamp Duty Land Tax
SEPA	Scottish Environmental Protection Agency
SFC	Scottish Fiscal Commission
SG	The Scottish Government
SLfT	Scottish Landfill Tax
SPA	State Pension Age
SWF	Scottish Welfare Fund
UKF	UK Finance

A full glossary of terms is available on our website:

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

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