

Office for  
**Budget  
Responsibility**

## **Devolved tax and spending forecasts**

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March 2018



# 1 Introduction and summary

## Introduction

- 1.1 The Office for Budget Responsibility (OBR) was established in 2010 to provide independent and authoritative analysis of the UK's public finances. Alongside the UK Government's Budgets and other fiscal statements, we produce forecasts for the economy and the public finances. We publish these in our *Economic and fiscal outlook (EFO)*.
- 1.2 Since 2012, we have forecast some tax streams that are devolved to the Scottish Parliament. Since 2014, we have also produced forecasts of taxes that are being devolved to the National Assembly for Wales. In November 2017 we produced a first illustrative forecast for an aspect of devolved social security in Scotland: carer's allowance. We have not yet produced forecasts for any devolved Northern Ireland taxes.
- 1.3 Our devolved tax and spending forecasts are published alongside each *EFO* and are consistent with our main UK forecasts. Further information on fiscal devolution in the UK and our forecasting role is available in the *Scotland, Wales and Northern Ireland* section of our website.
- 1.4 The Treasury draws on our devolved tax forecasts when making decisions about block grants in accordance with the Scottish and Welsh Governments' fiscal frameworks. The OBR has no direct involvement in these block grant decisions or adjustments, so we do not discuss any such changes in this document.

## Our approach

### Forecast methodology

- 1.5 It is not possible to replicate in full the methodology we use to produce our UK-wide forecasts when producing these devolved tax and spending forecasts. In particular, the macroeconomic data that we would need to produce a full Scottish or Welsh economic forecast and the associated determinants of tax and spending are either not available at a devolved level or are only available with a long lag. We are therefore not able to produce a Scottish or Welsh macroeconomic forecast to drive the relevant forecasts. These challenges would apply equally to any future forecast of Northern Ireland taxes.
- 1.6 Given these challenges, the methodologies we use are generally based on estimating and projecting Scottish and Welsh shares of relevant UK tax or social security spending streams. We typically assume that the shares will remain close to recent levels, unless available evidence suggests we should make adjustments to ensure our forecasts are central. For

example, if a newly announced policy were expected to have a disproportionate impact on a particular tax stream in Scotland or Wales, or there were evidence pointing to different trends in an underlying tax base. We typically adjust for differences in population growth.

- 1.7 The exceptions to this are where taxes have been fully devolved and we are able to take account of outturns. This is the case for Scotland's land and buildings transaction tax (LBTT) and Scottish landfill tax, which came into effect in April 2015. In 2018-19, outturns will become available for the Welsh land transaction tax (LTT) and landfill disposals tax (LDT).
- 1.8 As with our UK forecasts, the methodology and the forecasts represent the collective view of the three independent members of the OBR's Budget Responsibility Committee (BRC). The BRC takes full responsibility for the judgements that underpin them.

## Policy costings

- 1.9 The *Charter for Budget Responsibility* requires the OBR's published forecasts to reflect the impact of "all Government decisions and all other circumstances that may have a material impact on the fiscal outlook. In particular where the fiscal impact of these decisions and circumstances can be quantified with reasonable accuracy." The Treasury is responsible for the costing of UK Government policies, which it does by coordinating a process that delegates the analysis to the departments responsible for implementing the policy. Our role is to state publicly whether we believe each costing to be reasonable and central. This involves a detailed process of scrutiny and discussion with the Treasury and relevant departments. We then incorporate these costings (or our preferred ones – something that to date we have not found necessary) in our forecasts.<sup>1</sup>
- 1.10 The *Charter* also states that "where the fiscal impact of these decisions and circumstances cannot be quantified with reasonable accuracy, these impacts should be noted as specific fiscal risks". Where the UK Government has voiced a policy aspiration or ambition but not supported it with precise details, such as the timetable for implementation, we would not include it in our central forecast, but would instead note it as a fiscal risk in our *EFO*. We ask the Treasury to confirm whether or not such aspirations reflect firm Government policy.
- 1.11 We follow the same approach for our devolved tax and spending forecasts. For UK Government policies that affect a devolved tax, we ask that the relevant effect is estimated with supporting evidence. For policy changes to the devolved taxes themselves, we scrutinise a five-year costing and only include it in our forecast if we consider it reasonable and central. We would not include the effects of a devolved tax policy if it was not deemed a firm commitment – for example before it had been presented in sufficient detail to the relevant legislature as part of a formal budget process. We would also not include the effects of a policy until we had sufficient detail on its operation in each year of the forecast. Where we cannot include the effects in our central forecast, we note them as a fiscal risk.

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<sup>1</sup> See *Briefing paper No.6: Policy costings and our forecast* for a detailed description of this process.

## Forecast process

1.12 The process for producing these devolved tax and spending forecasts has been as follows:

- **HMRC officials and OBR staff produced draft Scottish and Welsh tax forecasts** using our preliminary UK economy and fiscal forecasts. This took into account the latest available information on LBTT and Scottish landfill tax. The BRC and OBR staff challenged these forecasts with officials from HMRC, the Scottish Fiscal Commission (SFC) and the Scottish and Welsh Governments at meetings held on 29 January and 21 February. As described in Chapter 4, in this forecast we have used the SFC's Scottish landfill tax model to produce our forecast. We are grateful to SFC officials for their help with the production of this aspect of the forecast.
- **Two weeks before the Spring Statement, HMRC officials and OBR staff provided a final set of Scottish and Welsh tax forecasts** using our final UK economy and fiscal forecasts.

1.13 The SFC produced its first five-year fiscal forecasts alongside the Scottish Government's draft Budget in December 2017. It updated its forecasts for Scottish income tax in February 2018 to account for the policy changes announced by the Scottish Government. The Welsh Government produced its most recent receipts forecasts in December 2017, with external scrutiny provided by academics at the University of Bangor. The forecasts we present in this document are our own. Differences between our forecasts and those of the SFC and the Welsh Government are discussed in the relevant chapters.

## UK-level economic determinants

1.14 Our fiscal forecasts are based on the economy forecasts presented in Chapter 3 of our *EFO*. Most economic forecasts focus on the outlook for real GDP, but it is nominal GDP – affected both by volumes and prices – that matters most when forecasting the public finances. Tax forecasts are particularly dependent on the profile and composition of economic activity. Tables 1.1 and 1.2 set out the key economic determinants of the devolved taxes forecast and how they have changed since our November forecast.

Table 1.1: Key determinants of the devolved taxes forecast

	Percentage change on previous year, unless otherwise specified						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>GDP</b>							
Real GDP	2.0	1.6	1.5	1.2	1.3	1.4	1.5
Nominal GDP	4.4	3.4	3.0	2.9	3.0	3.2	3.3
<b>Inflation</b>							
RPI	2.1	3.8	3.4	3.0	2.9	2.9	3.0
CPI	1.1	2.9	2.2	1.8	2.0	2.0	2.0
<b>Income tax</b>							
Average earnings	2.9	2.5	2.7	2.4	2.6	2.8	3.0
Employment (millions)	31.8	32.1	32.3	32.4	32.5	32.6	32.7
<b>Property</b>							
Residential property prices	6.1	4.8	3.3	2.5	2.2	2.5	3.0
Residential property transactions (000s)	1156	1223	1236	1260	1285	1312	1344
Commercial property prices	-12.3	2.3	-0.7	1.6	1.7	1.7	1.8
Commercial property transactions	7.0	0.2	1.5	1.2	1.3	1.4	1.5

Table 1.2: Change in key determinants of the devolved taxes forecast

	Percentage change on previous year, unless otherwise specified					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>GDP</b>						
Real GDP	0.2	0.1	0.0	0.0	-0.1	-0.1
Nominal GDP	0.3	0.2	0.1	-0.1	-0.2	0.0
<b>Inflation</b>						
RPI	0.0	0.4	0.2	0.0	0.0	0.0
CPI	0.0	0.1	0.0	0.0	0.0	0.0
<b>Income tax</b>						
Average earnings	0.3	0.5	0.0	-0.1	-0.3	-0.1
Employment (millions)	0.0	-0.1	0.0	0.0	0.0	0.0
<b>Property</b>						
Residential property prices	0.7	0.6	-0.5	-0.7	-0.9	-0.6
Residential property transactions (000s)	-7	-27	-28	-25	-16	-5
Commercial property prices	1.2	0.0	0.2	-0.1	-0.1	0.0
Commercial property transactions	1	0	0	0	0	0

## Summary of tax and spending forecasts

### Tax-by-tax forecasts for Scotland and Wales

1.15 Tables 1.3 and 1.4 detail our forecasts for the Scottish and Welsh taxes.

Table 1.3: Summary of March 2018 Scottish tax forecasts

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Full income tax	11,415	11,873	12,403	12,712	13,139	13,575	14,116
LBTT	481	561	586	619	653	692	736
Scottish landfill tax	148	142	111	93	94	86	84
Aggregates levy	60	54	56	55	56	56	57
Air passenger duty	282	295	307	319	331	342	355
<b>Total</b>	<b>12,386</b>	<b>12,926</b>	<b>13,463</b>	<b>13,798</b>	<b>14,272</b>	<b>14,752</b>	<b>15,347</b>

Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.

Table 1.4: Summary of March 2018 Welsh tax forecasts

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Income tax	1,952	2,006	2,053	2,099	2,165	2,232	2,317
SDLT / LTT	209	258	264	282	302	322	346
Landfill tax / LDT	32	27	27	23	21	20	18
Aggregates levy	39	35	37	36	37	37	37
<b>Total</b>	<b>2,233</b>	<b>2,326</b>	<b>2,380</b>	<b>2,441</b>	<b>2,524</b>	<b>2,611</b>	<b>2,718</b>

Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.

### Country-by-country tax forecasts

1.16 Tables 1.5 to 1.9 summarise each of our forecasts by country.

Table 1.5: Income tax on non-savings, non-dividend income

	£ million						
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Whole UK NSND income tax	162,850	168,534	173,566	178,149	184,395	190,763	198,799
of which:							
Scottish income tax (full NSND basis)	11,415	11,873	12,403	12,712	13,139	13,575	14,116
Welsh income tax (WRIT basis)	1,952	2,006	2,053	2,099	2,165	2,232	2,317
UK excluding Scottish Govt income tax	151,435	156,660	161,163	165,438	171,256	177,188	184,683
UK excluding Scottish and Welsh Govt income tax	149,483	154,655	159,110	163,338	169,091	174,957	182,366

Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.

Table 1.6: Property transactions taxes

	£ million						
	Outturn			Forecast			
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Whole UK property transaction taxes</b>	<b>12,280</b>	<b>13,512</b>	<b>13,630</b>	<b>14,106</b>	<b>14,720</b>	<b>15,388</b>	<b>16,163</b>
<i>of which:</i>							
Scottish LBTT	481	561	586	619	653	692	736
Welsh SDLT / LTT	209	258	264	282	302	322	346
UK excluding Scottish LBTT and Welsh SDLT / LTT	11,799	12,950	13,044	13,487	14,067	14,696	15,427
UK excluding Scottish LBTT	11,590	12,692	12,780	13,205	13,766	14,374	15,081

*Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.*

Table 1.7: Landfill taxes

	£ million						
	Outturn			Forecast			
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Whole UK landfill taxes</b>	<b>991</b>	<b>842</b>	<b>822</b>	<b>710</b>	<b>640</b>	<b>611</b>	<b>565</b>
<i>of which:</i>							
Scottish landfill tax (already devolved)	148	142	111	93	94	86	84
Welsh landfill tax / LDT	32	27	27	23	21	20	18
UK excluding Scottish and Welsh landfill taxes / LDT	843	699	711	617	546	526	481
UK excluding Scottish landfill tax	811	673	684	594	526	506	463

*Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.*

Table 1.8: Aggregates levy

	£ million						
	Outturn			Forecast			
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Whole UK aggregates levy</b>	<b>413</b>	<b>371</b>	<b>383</b>	<b>380</b>	<b>384</b>	<b>388</b>	<b>391</b>
<i>of which:</i>							
Scottish aggregates levy	60	54	56	55	56	56	57
Welsh aggregates levy	39	35	37	36	37	37	37
UK excluding Scottish and Welsh aggregates levy	353	317	328	325	328	332	334
UK excluding Scottish aggregates levy	314	282	291	289	291	295	297

*Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.*

Table 1.9: Air passenger duty

	£ million						
	Outturn			Forecast			
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Whole UK air passenger duty</b>	<b>3,236</b>	<b>3,387</b>	<b>3,520</b>	<b>3,667</b>	<b>3,795</b>	<b>3,932</b>	<b>4,073</b>
<i>of which:</i>							
Scottish duty	282	295	307	319	331	342	355
UK excluding Scottish duty	2,954	3,092	3,214	3,347	3,465	3,589	3,718

*Shaded cells represent notional estimates for years when tax devolution has not occurred or been confirmed.*



## Spending forecast

1.17 Table 1.10 contains our Great Britain and Scotland carer's allowance forecasts.

Table 1.10: Carer's allowance

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>GB carers allowance</b>	2,872	3,228	3,457	3,627	3,807	4,006
of which:						
Scottish expenditure	251	282	301	316	331	347
GB excluding Scottish expenditure	2,621	2,946	3,155	3,311	3,476	3,659

*Shaded cells represent notional estimates for years when full welfare devolution has not occurred or been confirmed.*

## Structure of the document

1.18 The rest of this document is structured as follows:

- **Chapter 2:** income tax on non-savings non-dividend income in Scotland and Wales.
- **Chapter 3:** property taxes in Scotland (LBTT) and Wales (LTT).
- **Chapter 4:** landfill taxes in Scotland and Wales, Scottish and Welsh shares of UK aggregates levy and the Scottish share of UK air passenger duty.
- **Chapter 5:** carer's allowance spending in Scotland.



## 2 Income tax

### Scottish income tax

- 2.1 The Scottish Parliament's income tax is levied on non-savings, non-dividend (NSND) income liabilities. This includes earnings from employment, self-employment, pension income, foreign income, taxable benefits and income from property. Tax liabilities for a particular year include both PAYE (pay-as-you-earn income tax, which is largely paid in the same year as the activity that created the tax liability) and self-assessment (where returns are submitted in the year after the activity that took place to create the tax liability).
- 2.2 The Scottish income tax rates must be set each year by the Scottish Parliament. An individual's taxpayer status is determined by the location of their main place of residence for the majority of the tax year. If this is in Scotland, they are defined as a Scottish taxpayer. It is the taxpayer's responsibility to tell HMRC their correct address – including for those with residences in both Scotland and elsewhere in the UK, for whom it is their responsibility to tell HMRC the address at which they are resident for the majority of the year.
- 2.3 Under the Scotland Act 2012, the existing basic, higher and additional rates of income tax levied by the UK Government were reduced by 10p in the pound for those individuals defined as Scottish taxpayers from April 2016. The Scottish Parliament then levied a new Scottish rate of income tax (SRIT), which applied equally to Scottish taxpayers in all the main UK bands. The Scottish Government chose to maintain the rates at the same level as the rest of the UK for 2016-17.
- 2.4 The Scotland Act 2016 provides for wider ranging powers over income tax, including the power to vary the rates and thresholds separately, as well as creating new bands paying different rates. The Scottish Government does not have the power to classify income as NSND or change the income tax personal allowance, but it could create an effect similar to increasing the allowance by introducing a zero rate band. From 2017-18 onwards the Scottish Government receives full NSND income tax liabilities from taxpayers in Scotland. All other income tax revenues are reserved to the UK Government.
- 2.5 As part of its most recent Budget process the Scottish Government announced new rates and bands for Scottish NSND income tax to take effect in 2018-19. Our forecast includes these, along with an assumption that future thresholds are raised in line with CPI inflation.

### Welsh rate of income tax

- 2.6 The Wales Act 2014 gave the Welsh Assembly the power to set Welsh rates of income tax (WRIT), as levied on NSND income liabilities, subject to a referendum. The Wales Act 2017

removed the need for a referendum. Following publication of the Welsh Government's fiscal framework in December 2016, Welsh rates of income tax will be devolved from April 2019. The existing basic, higher and additional rates of income tax levied by the UK Government will be reduced by 10p in the pound for those individuals defined as Welsh taxpayers. The Welsh Assembly will then levy separate Welsh rates for each band of income tax. The new Welsh income tax rates will be set each year by the Welsh Assembly. The block grant from the UK Government to Wales will then be reduced to reflect the fiscal impact of the devolution of these tax-raising powers. An individual will be defined as a Welsh taxpayer if their main residence is in Wales.

- 2.7 The forecasts presented in this document assume that the Welsh Assembly levies a 10p rate across all the income tax bands in every year.

## Methodologies

- 2.8 We generate a UK forecast for NSND income tax liabilities from the full UK income tax forecast published in our *Economic and fiscal outlook (EFO)*. The forecast models are run on our behalf by officials in HMRC. The key components are:

- Total **pay-as-you-earn (PAYE)** liabilities.
- **Self-assessment (SA)** liabilities on NSND income. For this forecast we exclude savings and dividends elements of SA income tax and adjust it to be on a liabilities basis (i.e. when the activity occurred). The full UK forecast is on a receipts basis (i.e. when the cash is received), consistent with the treatment of SA receipts in the National Accounts.
- **PAYE repayments and repayments to pension providers**, from our income tax repayments forecast.

- 2.9 We apply the latest estimated Scottish and Welsh shares to the UK total of these forecast components. These historically derived shares are adjusted for factors that can be forecast, such as when a previous policy measure has an asymmetric effect across countries and projected differences in population growth. We also include deductions in respect of the Scottish and Welsh shares of Gift Aid repayments.

- 2.10 Finally, we add estimates of the Scottish and Welsh income tax element of new policies announced since our previous forecast. As the UK Government has not announced any new policies affecting income tax in the 2018 Spring Statement, the only new policies are those announced by the Scottish Government in December 2017 and February 2018.

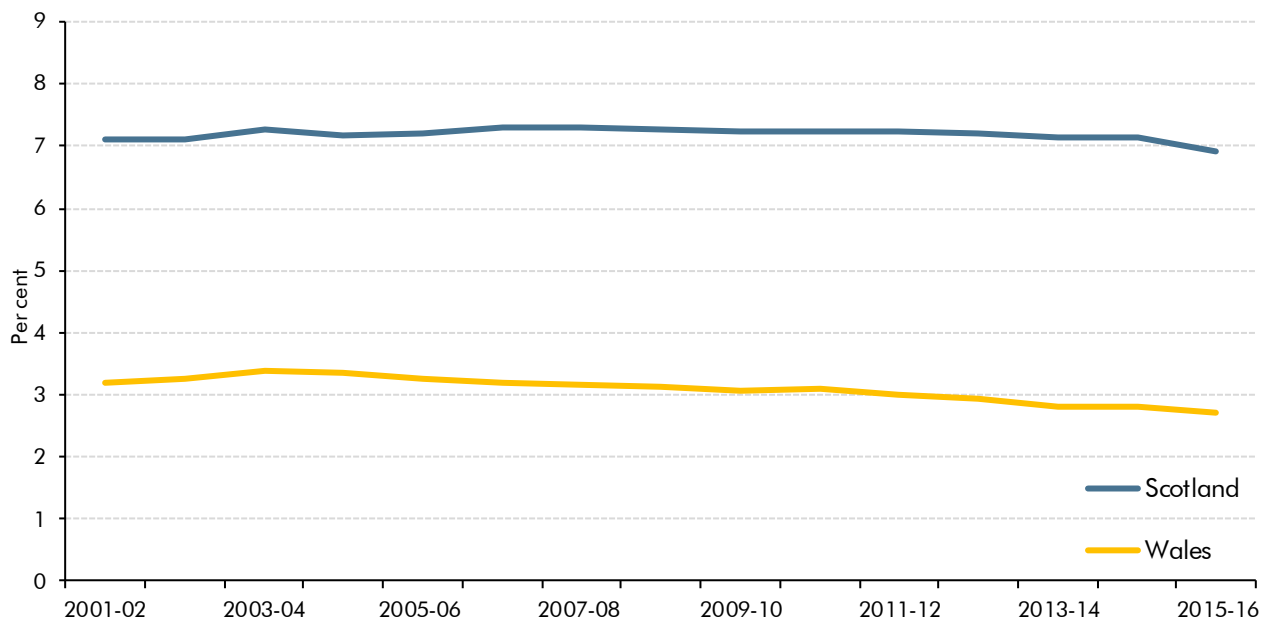
## Scottish and Welsh shares of income tax

- 2.11 Our estimates of the Scottish and Welsh shares of UK income tax use historical information from HMRC's Survey of Personal Incomes (SPI), an annual survey based on a sample of around 730,000 individuals in contact with HMRC during a year through the PAYE, SA or

repayment claim systems. The SPI data are published with a long lag. A new year of the survey has been incorporated for this forecast, but the data still relate to 2015-16.

- 2.12 There are some other limitations to using the SPI to generate the respective income tax shares. First, some observations within the SPI are missing location data and in other cases the location can be hard to determine. Second, sampling errors within the SPI could cause bias. While the Scottish- and Welsh-specific errors are unknown, at the UK level we can compare the total receipts estimated by the SPI to actual receipts received by HMRC. This error was +0.5, -2.0 and -1.7 per cent in 2013-14, 2014-15 and 2015-16 respectively.
- 2.13 HMRC continues to develop its real-time information (RTI) reporting for the entire population of PAYE income taxpayers and published the first set of experimental RTI statistics on 30 January 2018. It suggests that the latest Scottish and Welsh tax shares may be lower than those derived by projecting forward SPI data. However, it is not a direct comparison as it only reports PAYE earnings, not tax, and analysis of RTI data remains at an early stage and still subject to significant uncertainty. For now we note this as a possible risk to our forecast. We hope to make further use of RTI data in future.
- 2.14 Chart 2.1 shows the latest SPI-based estimates of the Scottish and Welsh share of total income tax, including from savings and dividends. The Scottish share has declined in recent years, with the latest estimate showing it falling 0.2 percentage points to 6.9 per cent between 2014-15 and 2015-16. The Scottish share of savings and dividend income is lower than its share of total income tax, which means that its share of NSND income is higher. SPI data suggest that the Scottish share of NSND income in 2015-16 was 7.1 per cent, though this too declined from 7.3 per cent in 2014-15. The Welsh share has also been declining since peaking in 2003-04 at 3.4 per cent. It was 2.7 per cent in 2015-16, down 0.1 percentage points from the previous year. In both cases the share is lower than the countries' share of the UK population: in 2015, 8.2 per cent of the UK population lived in Scotland and 4.8 per cent in Wales.

Chart 2.1: Scottish and Welsh historic share of all income tax liabilities



Note: Data unavailable for 2008-09 so the proportional shares are based on interpolation from the adjacent years.

Source: HMRC National Statistics table 3.11

2.15 The trends in the Scottish and Welsh shares shown in Chart 2.1 will have reflected at least four main factors, some of which we make assumptions about when projecting the shares forward in our devolved taxes forecast. They are: population growth, labour market trends, the distribution of income and the effect of Government policy decisions.

## Population growth

2.16 Trends in population growth differ across the countries of the UK, with the Scottish and Welsh populations assumed to grow more slowly than the UK population as a whole. This is explained by lower life expectancy, fertility and net international migration. We base our forecasts on the 2016-based ONS principal population projections that were published in October 2017. These are used to adjust the projected Scottish and Welsh shares of income tax. The respective adult population projections were set out in Table 2.1 of our November 2017 *Devolved taxes forecast* document.

2.17 We continue to use the projection for 'adults aged 16 and over' for this adjustment, but our results are not sensitive to using the 'total' or 'working-age' populations. This is a relatively simple adjustment that we feel improves our forecast accuracy, but many factors remain that we have not tried to adjust for, such as the knock-on effects from demographic trends to employment rates or wider differences in labour markets or the earnings distribution. These issues will remain under review.

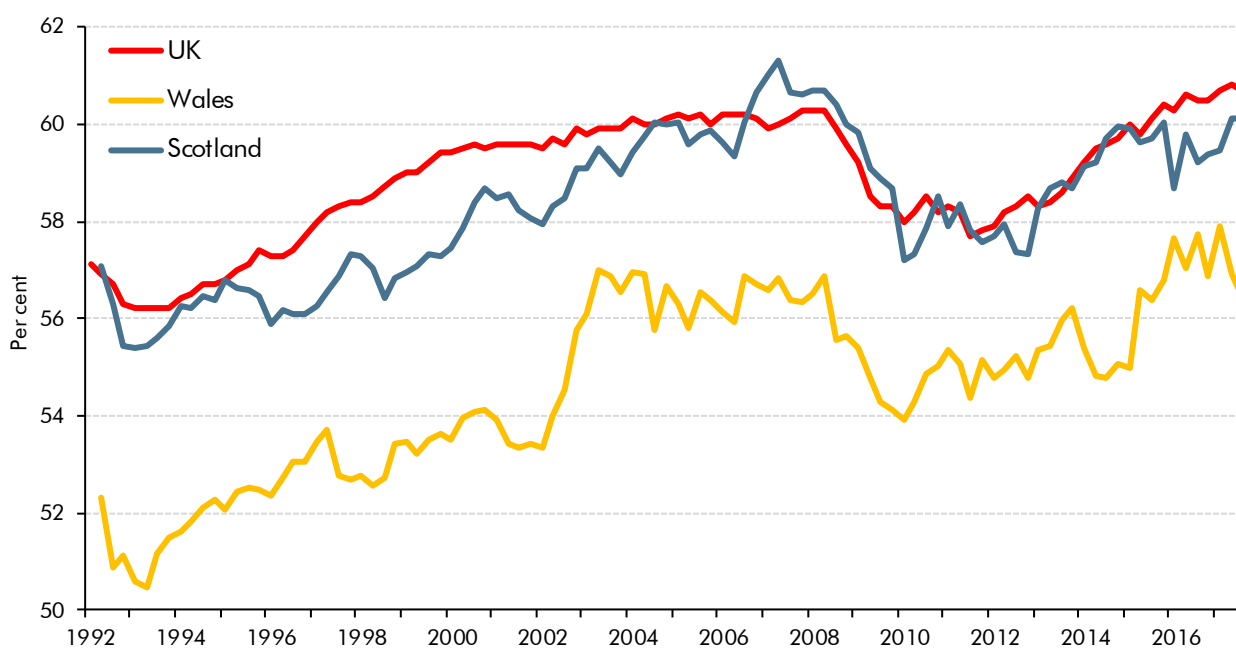
## Labour market trends

2.18 After considering the overall size of the population, the proportion of the population in employment and their productivity will also be key influences on the relative share of NSND income. We continue to assume that employment and output-per-worker in Scotland and

Wales grow at the same pace as the UK as a whole – so differences in employment rates and productivity in the base data are held constant across the forecast. Chart 2.2 shows that the employment rate in Scotland has generally been similar to that in the UK as a whole, while in Wales it has typically been lower. Unemployment rates are similar in Scotland and Wales, so the lower Welsh employment rate mainly reflects a higher inactivity rate.

- 2.19 Since 2015-16, the year from which the SPI-derived share must be projected forward, employment rates in Scotland and in Wales have followed relatively similar trends to the UK average, while fluctuating more across quarters. We do not adjust for different employment rate paths in our Scottish and Welsh forecasts since they would capture only one factor of the many that determine total income per person. Capturing trends in employment without also capturing potentially offsetting trends in average hours worked or productivity could bias our forecasts. In our recent UK forecasts, we have often seen upside surprises in employment accompanied by downside surprises in output and in earnings per worker.

Chart 2.2: Employment rates in the UK, Scotland and Wales



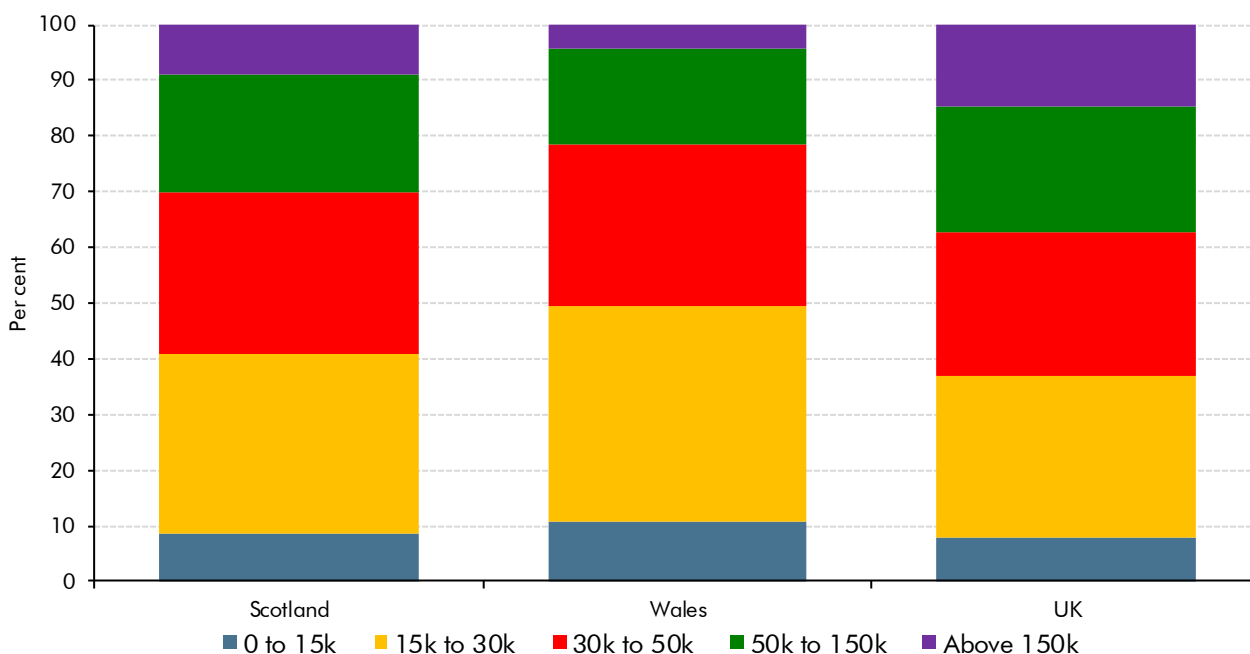
Source: ONS

## The income distribution

- 2.20 The income distribution differs between Scotland, Wales and the UK as a whole. While the rates and thresholds of the income tax regime have varied over time, those on higher incomes have always been subject to higher tax rates. Chart 2.3 shows the proportion of total taxpayer income by income bands in the 2015-16 SPI. These are very similar to the proportions derived from the 2014-15 SPI. Compared to the UK, the proportion of taxpayer income attributable to individuals with incomes below £30,000 is higher in Scotland, and more so in Wales. That pattern is reversed for incomes over £50,000 – and particularly for those over £150,000.

2.21 Higher income individuals have a stronger incentive for tax-motivated incorporation (TMI) given the greater differential between their effective income tax rate and the rate of corporation tax.<sup>1</sup> Over recent years TMIs have been increasing and we include a TMI adjustment in our Scottish and Welsh forecasts to account for this. We include an additional TMI effect in costing the Scottish Government’s recent policy changes.

Chart 2.3: Proportion of total taxpayer income by taxpayer income bands



### The effects of Government decisions

2.22 Changes to tax policy can have asymmetric effects in Scotland or Wales relative to the rest of the UK. In recent years, revenue-raising policies have generally affected the top end of the income distribution. These include the additional rate of income tax that applies to incomes over £150,000, the tapered withdrawal of personal allowances over £100,000, restrictions in relief for pensions contributions and various anti-avoidance measures. In contrast, tax cuts, most notably the successive increases in the personal allowance, have had a greater effect at the lower end of the income distribution.

2.23 We have adjusted the Scottish and Welsh shares used in our forecast to reflect the asymmetric effect of policies that have been implemented since 2015-16 and whose effects are therefore not captured in the latest available SPI data.

<sup>1</sup> For more information on tax-motivated incorporations see Chapter 5 of our 2017 *Fiscal risks report*.



## UK forecast

### Pre-measures forecast changes

2.24 Table 2.1 shows our UK forecast of tax liabilities on NSND income prior to including the effects of the Scottish Government's policy measures announced since our November forecast. Compared to November it has been revised up in all years from 2016-17.

Table 2.1: Whole UK forecast of tax liabilities on non-savings, non-dividend income

	£ billion								
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November 2017 <sup>1</sup>	151.0	155.5	161.8	166.8	170.3	175.0	181.6	188.6	195.9
March 2018 <sup>2</sup>	150.9	155.4	162.8	168.5	173.3	177.9	184.1	190.5	198.5
March 2018 <sup>1</sup>	150.9	155.4	162.8	168.5	173.2	177.8	184.3	190.7	198.7
Forecast difference	-0.1	-0.1	1.0	1.7	2.9	2.9	2.7	2.1	2.8
<b>March 2018 post-measures forecast</b>	<b>150.9</b>	<b>155.4</b>	<b>162.8</b>	<b>168.5</b>	<b>173.6</b>	<b>178.1</b>	<b>184.4</b>	<b>190.8</b>	<b>198.8</b>

<sup>1</sup> Excluding November measures.

<sup>2</sup> Including November measures.

2.25 Our pre-measures forecast changes reflect several factors:

- SA receipts outturn:** We expect total SA income tax receipts to be £2.9 billion higher in 2017-18 than assumed in our November forecast. The balancing payment on 2016-17 liabilities and the first payment on account (POA) for 2017-18 liabilities were due at the end of January. Both were stronger than expected. 2017-18 POA liabilities is based on 2016-17 liabilities, so will have been boosted by the higher balancing payment. Some of the strength in SA liabilities reflects a slower unwinding of the income shifting ahead of the dividend tax rise. However, NSND liabilities are also higher, with most of the £1 billion upward revision in 2016-17 shown in Table 2.1 being due to higher SA. As SA NSND liabilities are only around £15 billion, the upward revision is equivalent to 6 per cent of the total SA NSND forecast in that year. SA receipts can be volatile from year to year and forecast errors can be large. Indeed, the SA model is one of our top priorities for further development.<sup>2</sup> On an equivalent basis to Table 2.1 SA NSND liabilities are then up £1.4 billion in 2017-18 on our November forecast.
- PAYE receipts outturn:** We have revised in-year PAYE liabilities up by £0.4 billion. This relates to liabilities in 2017-18. The increase in PAYE on employee salaries reflects a pick-up in earnings growth over recent months and a higher effective tax rate on those salaries. Receipts growth has been particularly strong in the business services sector. Bonuses in both the financial and non-financial sectors are concentrated in the final months of the financial year, so PAYE liabilities for 2017-18 as a whole remain uncertain. We have assumed that bonuses rise in line with earnings, but this

<sup>2</sup> See Chapter 4 of our October 2017 *Forecast evaluation report* for more information on the models that we have prioritised for further development.

judgement is uncertain. On the same basis as Table 2.1 PAYE liabilities in 2018-19 are £0.9 billion higher in 2018-19 than forecast in November.

- **Macroeconomic determinants:** We have made only small revisions to our economy forecast. We have revised up our forecast for growth in GDP and wages and salaries in the short term, but growth in both is then weaker towards the end of the forecast.
- **Recosting of past measures and operational changes:** We routinely re-estimate the effects of past measures so that they are consistent with our latest forecast assumptions and include up-to-date information on how they are performing. The main changes are described in more detail in our *EFO*. We also remove previous costing adjustments once their effect is captured in the outturn data. One notable other change since November relates to HMRC's 'PAYE refresh', an operational scheme that allows for in-year corrections to underpayments and overpayments, which would previously have taken place the following year. It was introduced in July 2017 and we have assumed it has boosted PAYE receipts by £0.4 billion in 2017-18 (since underpayments collected earlier more than offset reduced overpayments). In future years, the effect on overall income tax should be broadly neutral.<sup>3</sup>

## Scottish forecast

### Pre-measures forecast

2.26 Our pre-measures Scottish income tax forecast is generated by applying our forecast of the Scottish share to the UK forecast described in the previous section. In November, we assumed the full NSND Scottish share would fall from 7.28 per cent in 2014-15 to 7.24 per cent in 2015-16 thanks to slower population growth in the Scotland and to previously announced policy measures taking effect. As Table 2.2 shows, the 2015-16 SPI showed a larger fall than we had expected, to 7.12 per cent. That lower starting point has led us to revise down the Scottish share in each subsequent year. The share increases in 2017-18 largely due to the Scottish Government's decision to freeze the higher rate threshold. The share estimates do not account for measures announced since November, so gradually declines from 2017-18 onwards primarily due to relatively slower population growth.

Table 2.2: Pre-measures Scottish share of income tax full NSND basis

	Per cent of UK total for non-savings, non-dividend liabilities								
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	7.28	7.24	7.21	7.26	7.25	7.24	7.23	7.22	7.21
March forecast	7.28	7.12	7.08	7.13	7.12	7.11	7.10	7.09	7.08
<b>Change</b>	0.00	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13
<i>Memo: November SRIT</i>	2.94	2.91	2.89						
<i>Memo: March SRIT</i>	2.94	2.88	2.86						
<i>Index relative population growth (2015-16 = 100)</i>		100.00	99.86	99.75	99.61	99.44	99.26	99.07	98.82

<sup>3</sup> See Chapter 4 of our *EFO* for more information.

## Scotland's new income tax schedule

2.27 For 2017-18 the Scottish Government differentiated income tax in Scotland from the rest of the UK by freezing the higher rate threshold in cash terms (at £43,000) whereas it increased in line with CPI inflation in the rest of the UK (to £45,000). In its December 2017 draft Budget, the Scottish Government announced several changes to the income tax schedule that will apply in Scotland in 2018-19, diverging further from the schedule applied in the rest of the UK. In February 2018, the Scottish Government announced another change by reducing the higher rate threshold compared to its draft Budget. The specific changes are:

- a new **starter rate** of 19 per cent, applying from the personal allowance to part-way through the basic rate band that applies in the rest of the UK;
- the same **basic rate** of 20 per cent, but applying between different thresholds;
- a new **intermediate rate** of 21 per cent, applying towards the top of the basic rate band that applies in the rest of the UK;
- the **higher rate** has been increased by one percentage point to 41 per cent, applying from a lower starting threshold than the one that applies in the rest of the UK; and
- the **additional/top rate** has also been increased by one percentage point to 46 per cent, but applying from same threshold as the one that applies in the rest of the UK.

2.28 Table 2.3 shows the UK and Scottish income tax rates and thresholds from 2017-18 until the end of the forecast. From 2019-20 onwards, we assume that all thresholds rise in line with CPI inflation except the additional/top rate, which remains constant in cash terms.

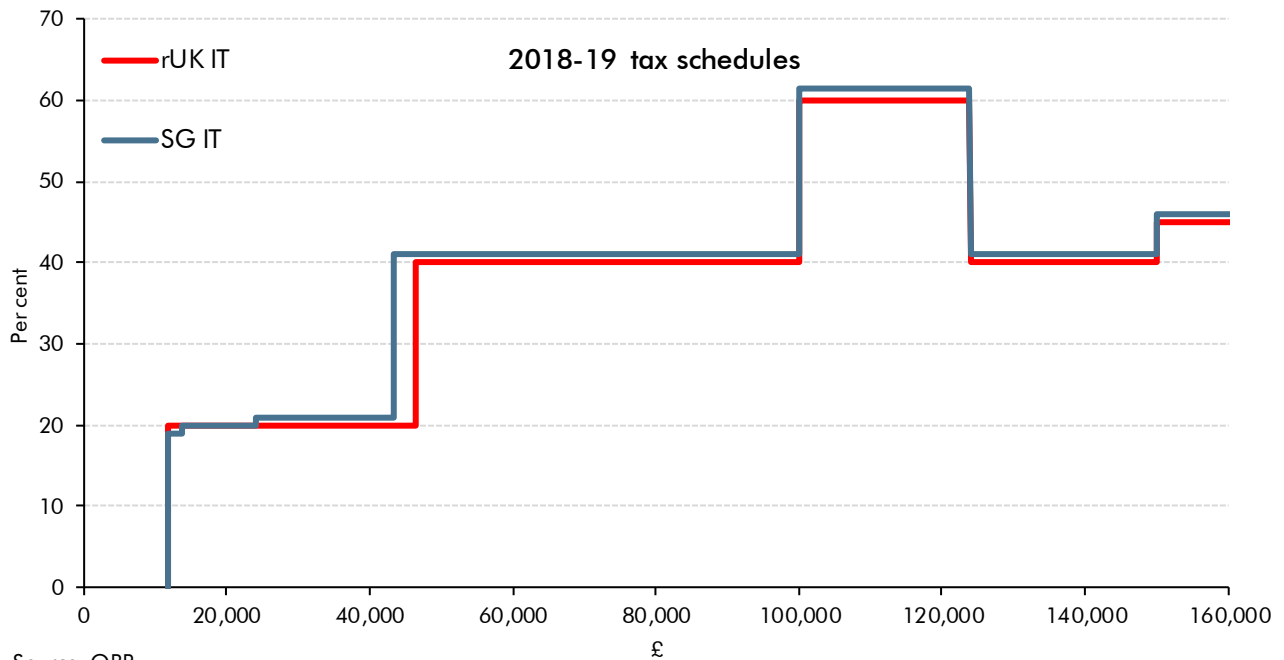
Table 2.3: NSND income tax parameters

	Per cent					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>UK Government tax rates</b>						
Basic rate	20	20	20	20	20	20
Higher rate	40	40	40	40	40	40
Additional rate	45	45	45	45	45	45
<b>Scottish Government tax rates</b>						
Starter rate	n/a	19	19	19	19	19
Basic rate	20	20	20	20	20	20
Intermediate rate	n/a	21	21	21	21	21
Higher rate	40	41	41	41	41	41
Additional/top rate	45	46	46	46	46	46
£						
<b>UK Government tax thresholds</b>						
Personal allowance	11,500	11,850	12,130	12,360	12,610	12,870
Higher rate	45,000	46,350	47,530	48,460	49,510	50,570
Additional rate	150,000	150,000	150,000	150,000	150,000	150,000
<b>Scottish Government tax thresholds</b>						
Personal allowance	11,500	11,850	12,130	12,360	12,610	12,870
Basic rate	n/a	13,850	14,178	14,446	14,738	15,041
Intermediate rate	n/a	24,000	24,567	25,023	25,523	26,042
Higher rate	43,000	43,430	44,453	45,261	46,154	47,077
Additional/top rate	150,000	150,000	150,000	150,000	150,000	150,000

*Shaded cells represent estimated policy assumptions needed for forecasting purposes. From 2019-20 onwards, we assume that all thresholds rise in line with CPI inflation except the additional/top rate, which remains constant in cash terms.*

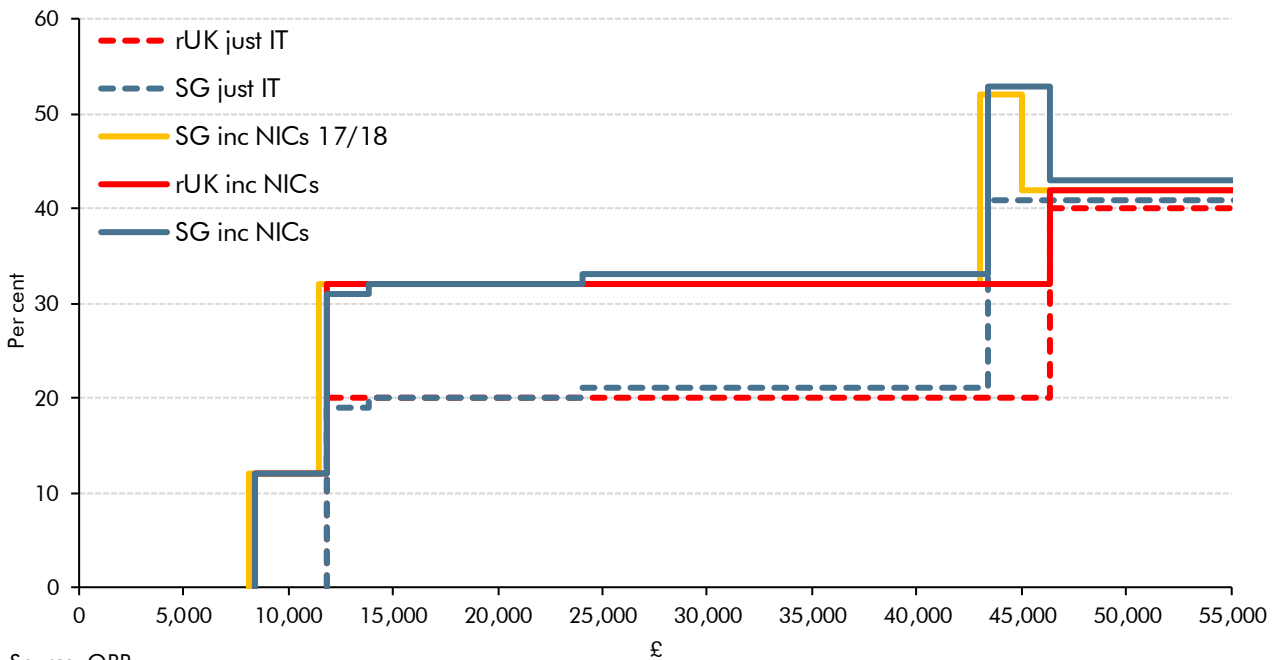
2.29 Charts 2.4 to 2.6 compare the income tax regimes in Scotland and the rest of the UK in 2018-19. Chart 2.4 shows the respective income tax schedules on NSND income up to £160,000 – just beyond the additional/top rate threshold. The marginal rate in Scotland is lower on the first £2,000 of income above the personal allowance; equal on the next £10,150 of taxable income; and higher thereafter, which covers all income above £24,000. The largest difference in marginal tax rates is on incomes between £43,430 and £46,350 where the rate in Scotland will be 21 percentage points higher. The high marginal tax rates between £100,000 and £123,700 are caused by the personal allowance taper, which removes 50 pence of the personal allowance for every £1 increase in income.

Chart 2.4: Marginal tax rates on NSND income in Scotland and the rest of the UK



2.30 Chart 2.5 focuses on the lower end of the distribution, but includes National Insurance contributions (NICs) too. It also shows how the Scottish schedule has moved relative to 2017-18. As the NICs upper earnings limit is linked to the UK Government's higher rate threshold, the lower threshold in Scotland means that between £43,430 and £46,350 Scottish taxpayers will face both the higher income tax rate (41 per cent) and the main rate of employee NICs (12 per cent), giving a combined marginal tax rate of 53 per cent. In 2017-18 this affected £2,000 of income; in 2018-19 it will affect £2,920 of income.

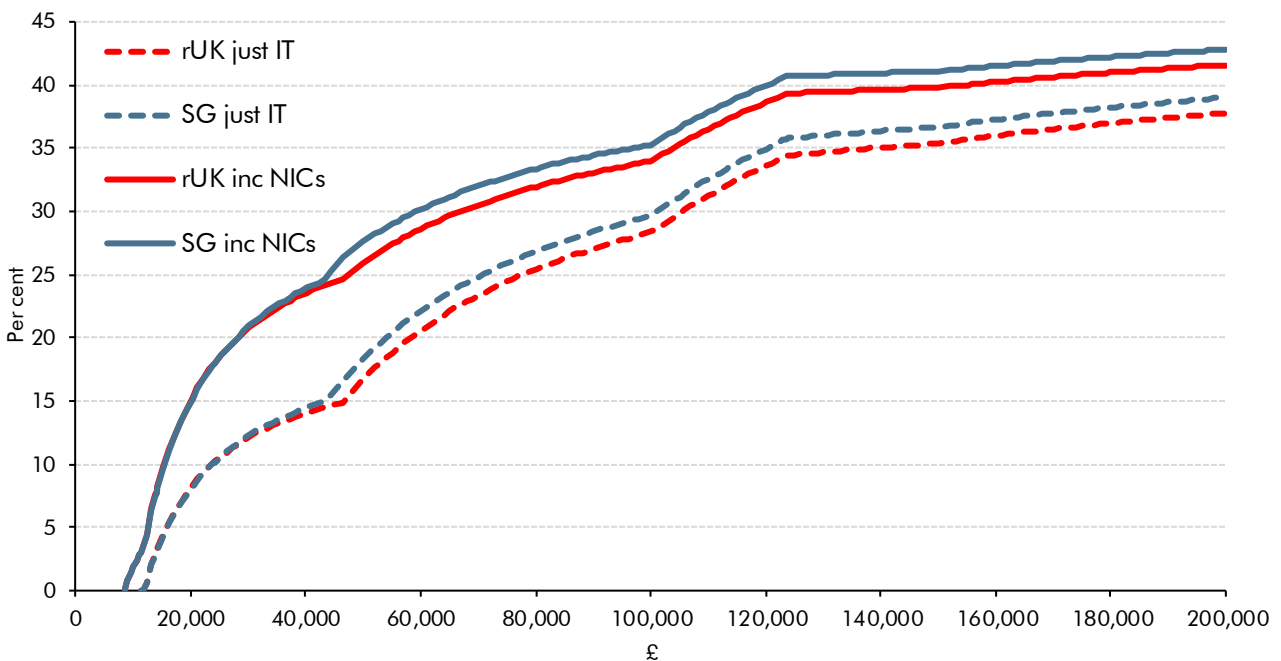
Chart 2.5: Marginal tax rates on NSND earnings in Scotland and the rest of the UK



Source: OBR

2.31 Chart 2.6 shows the effective or average tax rates for employee earnings that result from the respective tax schedules. These are very similar at the lower end of the income distribution, but then diverge on incomes above the Scottish higher rate threshold.

Chart 2.6: Effective tax rates on NSND employee earnings in Scotland and the rest of the UK



Source: OBR

2.32 The Scottish Government’s policy changes generate very small cash giveaways (of £20 or less) to just over half of Scottish taxpayers, but larger cash takeaways from taxpayers higher

up the income distribution. The net effect is to increase liabilities relative to applying the UK Government's income tax rates and thresholds or applying the Scottish Government's 2017-18 rates and thresholds increased by CPI inflation (except the additional rate). When costing the policy change, it is the latter that provides the 'baseline' since those are the rates and thresholds that would have applied in the absence of these policy changes.

## Costing the Scottish Government's policy announcements

- 2.33 The policy costing follows the same approach we use when considering UK Government costings.<sup>4</sup> This involves establishing the affected tax base, estimating a 'static' yield – by applying the difference between the new rates and thresholds and those in the baseline – then considering any behavioural effects. We are interested in the effects on all UK receipts, not just those on Scottish income tax.
- 2.34 The static costing was estimated using HMRC's Personal Tax Model (PTM), which is a micro-simulation model based on the 2015-16 SPI data, and in this case restricted to Scottish taxpayers. The static yield rises from £274 million in 2018-19 to £317 million in 2022-23, as reported in Table 2.4. Incomes in the PTM are grown from 2015-16 in line with our UK forecasts for wages and salaries and self-employment income. This projection means we cannot know for sure the size of the tax base, or the underlying distribution of incomes, in 2018-19. This is the main uncertainty in the static costing.
- 2.35 There is a range of potential behavioural responses. For those at the lower end of the income distribution – whether winners or losers – the effects are likely to be negligible because the cash amounts involved are so small. For those higher up the income distribution, we expect relatively larger behavioural responses.
- 2.36 The behavioural effects include:
- **Changes in labour market participation, hours worked, tax planning and tax avoidance.** Taxable income elasticities (TIEs) are a measure of the responsiveness of taxable income to changes in tax rates. They attempt to capture a range of possible responses in a single elasticity. Those now facing a higher marginal tax rate will have lower post-tax earnings on each additional hour worked, reducing the incentive to work more and raising the incentive to declare less of what is earned. These incentives are also affected by the overall amount of tax paid on that income – the effective tax rate – but the effect of changes in effective tax rates tends to be more muted than changes in marginal rates. Dividends income tax is normally more responsive to tax changes, but is outside of the scope of this measure.
  - **Changes in migration between Scotland and the rest of the UK due to lower income tax rates.** ONS data show sizeable population flows already, so modest changes could affect the costing. This could involve more flows out of Scotland or fewer people moving into Scotland. For those moving from Scotland the potential tax saving from

<sup>4</sup> For more information see Briefing Paper No.6: *Policy costings and our forecast*, available on our website.

migrating would need to be compared to the costs and disruption associated with moving. TIEs may already capture some of this effect.

- **Switching tax residence from Scotland to the rest of the UK to take advantage of the lower tax rates.** The costs of this response are likely to be much lower than those of actual migration, particularly for those that already own a property either side of the border.<sup>5</sup> We are not aware of any reliable data source in this area, but it would only require a relatively small number of the highest earnings taxpayers to switch their tax residence to have a material effect on the costing.
- **The incentive for tax-motivated incorporation (TMI).** Some higher earners in Scotland may now choose to incorporate and benefit from lower taxes on corporate profits and dividends than the equivalent tax treatment of employment income. The loss in Scottish Government income tax and UK Government NICs receipts would outweigh the increase in corporation tax and dividends income tax receipts to the UK Government. The effect has been calculated using HMRC's Scottish-specific TMI model.
- **The bringing forward or 'forestalling' of income into 2017-18 so that it is taxed at a lower rate.** For income tax policies, this type of behavioural response has been largely confined to the shifting of dividend income – for example, around the pre-announced introduction of the additional rate and then of its reduction from 50 to 45 per cent. But some high earners may be able to shift employment or self-employment income forward into 2017-18.
- **Implementing the new regime.** Many other aspects of the tax system are aligned to the UK Government's parameters, so there are wider issues associated with implementing the new regime. For example, HMRC has already said it will not change the way it treats 'relief at source' pension schemes, which will continue to get relief at 20 per cent. This means those within the starter rate band will benefit from an extra 1 per cent relief, which HMRC will not attempt to recover, resulting in a small revenue cost. Those within the intermediate rate band will be entitled to the full 21 per cent relief, but will only receive it if they actively reclaim the extra 1 per cent from HMRC. Many of those affected will be unaware of the change and will not claim their full entitlement, while others will be aware but simply choose not to do so. In each case there is a revenue gain to HMRC. There may also be implications for other reliefs such as the marriage allowance and Gift Aid. More generally the increased complexity of UK-wide tax might result in increased taxpayer error and in turn may create additional calls on HMRC's compliance and operational resources.

2.37 Table 2.4 summarises the policy costing in respect of Scottish Government NSND income tax liabilities:

<sup>5</sup> Analytically this judgement accounts those who would change their address from the one as recorded as in Scotland in the SPI to one in the rest of the UK given their incentive to do so. This effect will occur if individuals either spend more time at one of their properties, or make 'errors' or fail to take reasonable care in recording where they reside and on balance opt for the property which results in the lower tax payment. Neither taxpayers nor employers are legally required to tell HMRC if the taxpayer changes their address.



- **Taxable income elasticities – marginal and effective tax rate effects:** For the marginal tax rate we have used progressively higher TIEs – zero for the first £40,000 of income, rising to 0.2 for income between £125,000 and £150,000 and 0.45 for income above £150,000. For the effective tax rate we have used lower TIEs of 0.06 for higher rate taxpayers and 0.25 for additional rate taxpayers. With both higher TIEs and larger changes in tax rates, the largest effect on the costing relates to marginal tax rates.
- **Migration – actual and tax-residence:** We assumed that the effect on receipts from genuine migration, while not zero, will be negligible. But for those with multiple residences and the flexibility to change the amount of time spent at each, we have assumed a material effect on the costing. We have applied a top-down judgement that around £20 million of NSND income tax liabilities will be switched from Scotland to the rest of the UK in 2018-19. An effect of this size would only require a small number of additional rate payers – in the low tens – to change their registered address.
- **Tax motivated incorporations (TMIs):** the effect of TMIs on Scottish NSND income tax is entirely negative. We assume a negligible TMI effect in 2018-19, but that it increases over the forecast as the stock of additional incorporations builds up.
- **Other factors:** We have assumed that forestalling and operational implementation issues will have no measurable effect on the forecast.

Table 2.4: Scottish Government income tax policy changes: effect on Scottish NSND income tax (liabilities basis)

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Static costing		274	281	290	302	317
<b>Reduction due to behaviour</b>	<b>neg</b>	<b>-49</b>	<b>-58</b>	<b>-64</b>	<b>-70</b>	<b>-77</b>
<i>of which:</i>						
Marginal rate behaviour		-24	-25	-26	-26	-28
Effective rate behaviour		-4	-5	-5	-5	-5
Residency changes and migration		-21	-21	-22	-22	-22
Incorporations		0	-7	-12	-17	-22
<b>Post-behavioural costing</b>	<b>neg</b>	<b>225</b>	<b>223</b>	<b>226</b>	<b>232</b>	<b>240</b>

2.38 Table 2.5 splits the £225 million post-behavioural yield in 2018-19 into the gross yield from taxpayers that will pay more under the new tax schedule than in the baseline, and the gross cost from taxpayers that will pay less. The cut-off point is at incomes of £26,000. For the static costing, this is further broken down into the number of taxpayers and the average loss or gain. For the behavioural effects, such a breakdown is not possible.<sup>6</sup>

<sup>6</sup> Given the methodologies used to estimate behavioural effects, it is not possible to estimate the number of taxpayers at specific points in the distribution, though given the size of changes it is unlikely that the numbers would be substantially different. The static estimate should also be treated with some caution as it is based on the outputs of the PTM model used for our pre-measures forecast, so is subject to the same uncertainties as the broader tax base that come from needing to project an 2018-19 distribution from the 2015-16 base distribution, which is done by growing it in line with UK-level trends in relevant ONS data and our forecasts.

Table 2.5: Distribution of taxpayers 2018-19

	Static			Post-behaviour	
	Number of taxpayers	Average change (£)	Costing (£ million)	Costing (£ million)	
Taxpayers receiving tax cut	1,400,000	-17	-24	-23	
Taxpayers paying more tax	1,140,000	262	299	248	

2.39 Table 2.6 summarises the policy costing from the perspective of the UK public finances as a whole. It is presented on a National Accounts basis, consistent with how the official statistics are recorded and how our public finance forecasts are presented in our main *EFO*. The effect of the policy changes on the relevant receipts streams is small in the context of the UK public finances. We assume that any additional expenditure that has to be undertaken by HMRC to implement the regime is met within its existing Departmental Expenditure Limit (DEL), so only record the effects on different tax streams.

2.40 As well as the Scottish income tax element of the costing, shown on a National Accounts basis, three UK tax streams are affected: income tax outside Scotland and corporation tax are boosted by TMIs and the former also by the switching of tax-residence, while NICs receipts are hit both by the TIE and the TMI responses.

Table 2.6: Scottish Government income tax policy changes: effect on UK public finances (National Accounts basis)

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>SG policy change</b>	<b>neg</b>	217	255	252	259	270
<i>of which:</i>						
SG income tax		221	235	230	235	243
UKG income tax		0	23	24	26	28
NICs		-6	-8	-10	-12	-14
Corporation tax		2	5	8	11	13

2.41 Powers over the personal allowance (PA) have not been devolved but the Scottish Government could raise the 'effective PA' if it wished by introducing a zero per cent band of income tax. The Scottish Government has a stated policy intention to use a zero-rate band to raise the effective PA to £12,750 in 2021-22 if the PA in the rest of the UK were below that. Our current forecast for CPI inflation suggests the PA will reach £12,610 in that year. As in November, we note the Scottish Government's policy intention as a risk rather than incorporating it in our central forecast. It relies on two other factors for it to take effect: cumulative CPI inflation and as-yet unspecified UK Government policy decisions. The UK Government has a policy intention for the PA to reach a £12,500 in 2020-21, but as it has not yet set out the path by which this will be achieved, it is not included in our central forecast for UK income tax receipts, as we explain in our main *EFO*.

## Final post-measures Scottish income tax forecast

2.42 Table 2.7 sets out our new forecast for Scottish income tax liabilities, taking into account the pre-measures revisions to the Scottish share and the new Scottish income tax rates and thresholds. These are based on the full devolution of NSND income tax liabilities that came into effect this year. The table shows that the lower Scottish share has reduced the forecast, but that this has been partly offset by a higher UK-wide NSND income tax forecast. From 2018-19 onwards, the Scottish Government's income tax policies boost revenue.

Table 2.7: Changes in full Scottish NSND income tax since November

	£ million									
	Outturn				Forecast					
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	
November forecast	10,894	11,138	11,520	11,932	12,153	12,462	12,943	13,432	13,935	
March forecast	10,891	10,957	11,415	11,873	12,403	12,712	13,139	13,575	14,116	
<b>Change</b>	<b>-4</b>	<b>-181</b>	<b>-105</b>	<b>-58</b>	<b>250</b>	<b>249</b>	<b>196</b>	<b>143</b>	<b>181</b>	
<i>of which:</i>										
Scottish share	0	-175	-186	-197	-198	-201	-209	-219	-231	
UK NSND forecast	-4	-6	71	124	208	204	191	150	199	
Other <sup>1</sup>	0	0	10	15	15	23	-11	-19	-27	
Scottish Government policy measures					225	223	226	232	240	
November forecast SRIT <sup>2</sup>	4,389	4,455	4,597	-	-	-	-	-	-	
March forecast SRIT	4,388	4,430	4,609	-	-	-	-	-	-	

<sup>1</sup> Includes gift aid estimates and recastings of previous measures.

<sup>2</sup> SRIT will only operate in 2016-17.

## Comparison with Scottish Fiscal Commission forecasts

2.43 The Scottish Fiscal Commission's (SFC) income tax forecast, published in December, is an average of £27 million a year (less than half a per cent) higher than ours between 2018-19 and 2022-23 (see Table 2.8). Differences between our projections are larger for the period between the most recent SPI data and the beginning of the forecast. The SFC's forecast is initially flatter than ours but rises more rapidly from 2018-19 onwards.

2.44 There are many factors that will contribute to the differences between our forecasts. It is not possible to quantify all the effects, but key ones include:

- **Timing and data:** Our forecasts take place at different times with different economic and receipts input data. There have been two important developments since the SFC's last forecast. First, stronger-than-expected receipts, which probably increases our forecast relative to the SFC. Second, we have been able to use the 2015-16 SPI, which was not available to the SFC in December, and this reduces the forecast.<sup>7</sup>

<sup>7</sup> Our forecast is run on our behalf by analysts in HMRC who are able to access taxpayer confidential information and can therefore use initial versions of the SPI much earlier than non-HMRC analysts such as those at the SFC. The latter must wait until a public-use version has been created that anonymises records to protect taxpayer confidentiality.

- **Economic determinants:** We assume that determinants of the Scottish tax forecast (such as employment or average earnings) grow in line with those in the rest of the UK, drawn from our UK-wide economic forecast. The SFC’s forecast uses its own Scottish-specific economy and labour market forecasts.
- **Modelling:** The SFC uses a micro-simulation forecast, whereas we build up our forecast from specific receipts streams (i.e. PAYE, SA, repayments) with additional components estimated using HMRC’s PTM model. As well as these different modelling approaches, we have incorporated different judgements throughout our models. These differences may work in both directions and in different ways across the forecast.
- **Policy costing:** We have used a very similar approach as the SFC in costing the Scottish Government’s new policy measures. Table 2.9 shows there are two main differences between our costings. The first is due to the pre-measures forecast described above, which provides the tax base from which to estimate the static costing. The second is due to slightly different behavioural adjustments. The broad rationale is the same<sup>8</sup> – we both assume that the behavioural response increases the further we move up the income distribution, with the largest response expected from additional rate taxpayers. However, the way this is modelled is slightly different. The SFC has used higher TIEs than we have, but we have then made separate adjustments for TMs and changes in main residence. The proportionate loss of static yield to behavioural responses is similar, though we assume it will increase more rapidly over time than the SFC has, largely reflecting the build-up of additional TMs.

Table 2.8: Income tax forecast comparison

	£ billion, unless otherwise stated								
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC February forecast	10.89	10.93	11.21	11.58	12.18	12.65	13.15	13.73	14.37
OBR March forecast	10.89	10.96	11.41	11.87	12.40	12.71	13.14	13.58	14.12
<b>Difference</b>	<b>0.00</b>	<b>0.03</b>	<b>0.20</b>	<b>0.29</b>	<b>0.23</b>	<b>0.06</b>	<b>-0.01</b>	<b>-0.16</b>	<b>-0.26</b>
<i>Difference (per cent)</i>	<i>0.0</i>	<i>0.2</i>	<i>1.8</i>	<i>2.5</i>	<i>1.9</i>	<i>0.5</i>	<i>-0.1</i>	<i>-1.2</i>	<i>-1.8</i>

<sup>8</sup> See the SFC supplementary paper discussing the behavioural adjustments used for the policy costing ‘How we forecast behavioural responses to income tax policy’, March 2018.

Table 2.9: Scottish Government NSND income tax liabilities policy costing comparison

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>OBR costing</b>						
Static costing	0	274	281	290	302	317
Reduction due to behaviour		-49	-58	-64	-70	-77
Post-behavioural costing	0	225	223	226	232	240
<i>Percentage reduction due to behaviour</i>		-18	-21	-22	-23	-24
<b>SFC costing</b>						
Static costing	0	276	287	302	319	338
Reduction due to behaviour		-56	-59	-63	-67	-71
Post-behavioural costing	0	219	228	239	252	267
<i>Percentage reduction due to behaviour</i>		-20	-21	-21	-21	-21

## Welsh forecast

2.45 Table 2.10 shows our forecast for the Welsh share of income tax after taking into account the 2015-16 SPI data. This was very close to the 2015-16 share we assumed in November, so the shares are little changed since then. We apply a population adjustment in the same way we do for Scotland. This has not changed since November either.

Table 2.10: Welsh share of income tax

	Per cent of UK total for non-savings, non-dividend liabilities								
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	1.26	1.23	1.22	1.21	1.20	1.20	1.19	1.19	1.19
March forecast	1.26	1.23	1.22	1.21	1.20	1.20	1.19	1.19	1.18
<b>Change</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<i>Index relative population growth (2015-16 = 100)</i>		100.00	99.86	99.75	99.61	99.44	99.26	99.07	98.82

2.46 Table 2.11 shows our latest Welsh income tax forecast and provides a breakdown of the changes since November. The forecast is marginally higher in every year, driven almost entirely by our higher UK NSND forecast.

2.47 We include an effect from TMIs that is proportional to the Welsh share of income tax under WRIT. Preliminary analysis from HMRC using Welsh-specific data show that incorporations in Wales have followed a similar trend to the UK as a whole.

Table 2.11: Changes in Welsh income tax since November

	£ million							
	Outturn		Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	1887	1935	1980	2011	2058	2132	2209	2287
March forecast	1890	1952	2006	2053	2099	2165	2232	2317
<b>Change</b>	<b>3</b>	<b>17</b>	<b>26</b>	<b>42</b>	<b>42</b>	<b>33</b>	<b>23</b>	<b>30</b>
<i>of which:</i>								
Welsh share	-1	-2	-2	1	0	-2	-2	-2
UK NSND forecast	-1	12	21	35	34	32	25	33
Other <sup>1</sup>	5	7	7	6	7	3	0	-2

<sup>1</sup> Includes gift aid estimates and recosting of previous measures.

2.48 The terms of the Welsh Government's fiscal framework introduced the need to forecast income tax split by taxpayer bands for Wales and the rest of the UK (in this case England and Northern Ireland). Our forecasting approach does not readily allow for the production of such breakdowns, so we have been working with HMRC to develop a methodology that can be applied efficiently and effectively during the highly time-pressured final stages of our fiscal forecast process. This has so far proved difficult, so we will be engaging with HMRC and the Treasury to ensure that it will be operational in time for Autumn Budget 2018, when the terms of the fiscal framework will first be applied at a UK Government fiscal event. We hope to be able to publish our methodology on this ahead of our next forecast.

# 3 Taxes on property transactions

## Introduction

3.1 From April 2018 there will be three different property transactions tax systems operating in the UK: stamp duty land tax (SDLT) in England and Northern Ireland; land and buildings transaction tax in Scotland (LBTT) and the recently announced land transaction tax (LTT) in Wales. This chapter compares their structures and sets out our latest forecast for each.

## Scottish land and buildings transaction tax

3.2 In April 2015, LBTT replaced SDLT in Scotland. LBTT shares many features with SDLT in terms of reliefs and exemptions, tax calculated using marginal rates (i.e. on a 'slice' of the value rather than the whole 'slab' value) and different treatment for residential and commercial transactions. LBTT is collected by Revenue Scotland rather than by HMRC.

## Residential property

3.3 The LBTT rates and thresholds for residential property 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; and
- 12 per cent on the portion above £750,000.

3.4 The main change since devolution was the introduction in April 2016 of the 3 per cent additional dwellings supplement (ADS). This applies to purchases of second homes and buy-to-let properties. It matches the surcharge introduced by the UK Government at the same time. It applies to all transactions from £40,000, even those that would otherwise not be liable to LBTT. For example, a £100,000 purchase of a buy-to-let property would be subject to the 3 per cent ADS but would not be liable to LBTT if purchased as a primary residence. Taxpayers are eligible for an ADS refund if they sell their main residence within 18 months, but then have up to 5 years to claim it. The refund period for the surcharge in SDLT is 36 months.

3.5 In December 2017 the Scottish Government also announced a first-time buyers' relief that increased the starting threshold for first-time buyers from £145,000 to £175,000. The

range of the relief is much smaller than that announced by the UK Government, which extends from £125,000 to £300,000. But the LBTT relief applies to all first-time buyers, unlike the UK Government's relief which only applies to purchases up to £500,000. The LBTT first-time buyers' relief will come into effect from 1 June 2018.

### Commercial property

3.6 The LBTT rates for Scottish commercial property are:

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

3.7 The LBTT rates for Scottish commercial property applied to leases in terms of the net present value of the rent are:

- 0 per cent on property leases with a net present value up to £150,000; and
- 1 per cent on the portion above £150,000.

### Welsh land transaction tax

3.8 The Land Transaction Tax and Anti-avoidance of Devolved Taxes (Wales) Act 2017 replaces SDLT in Wales with LTT from April 2018. In October 2017 the Welsh Government announced in its draft budget details of the tax rates and thresholds for LTT. In December 2017 it announced further changes to increase the lower residential threshold from £150,000 to £180,000 but also to increase the marginal tax rate from 2.5 to 3.5 percent. The rest of the tax schedule remains the same as that announced in October.

3.9 LTT maintains broadly the same features as SDLT, with a marginal 'slice' schedule of rates and a 3 per cent surcharge on additional residential properties, with a 36-month refund period for main residences. It also has broadly the same structure of reliefs and exemptions as SDLT, but it does not include a first-time buyers relief. LTT will be collected by a new Welsh Revenue Authority rather than by HMRC.

### Residential property

3.10 The LTT rates and thresholds for residential property are:

- 0 per cent on transactions up to £180,000;
- 3.5 per cent on the portion above £180,000 up to £250,000;
- 5 per cent on the portion above £250,000 up to £400,000;



- 7.5 per cent on the portion above £400,000 up to 750,000;
- 10 per cent on the portion above £750,000 up to £1.5 million; and
- 12 per cent on the portion above £1.5 million.

## Commercial property

3.11 The LTT rates and threshold for commercial property are:

- 0 per cent on property transactions up to £150,000;
- 1 per cent on the portion above £150,000 up to £250,000;
- 5 per cent on the portion above £250,000 up to £1 million; and
- 6 per cent on the portion above £1 million.

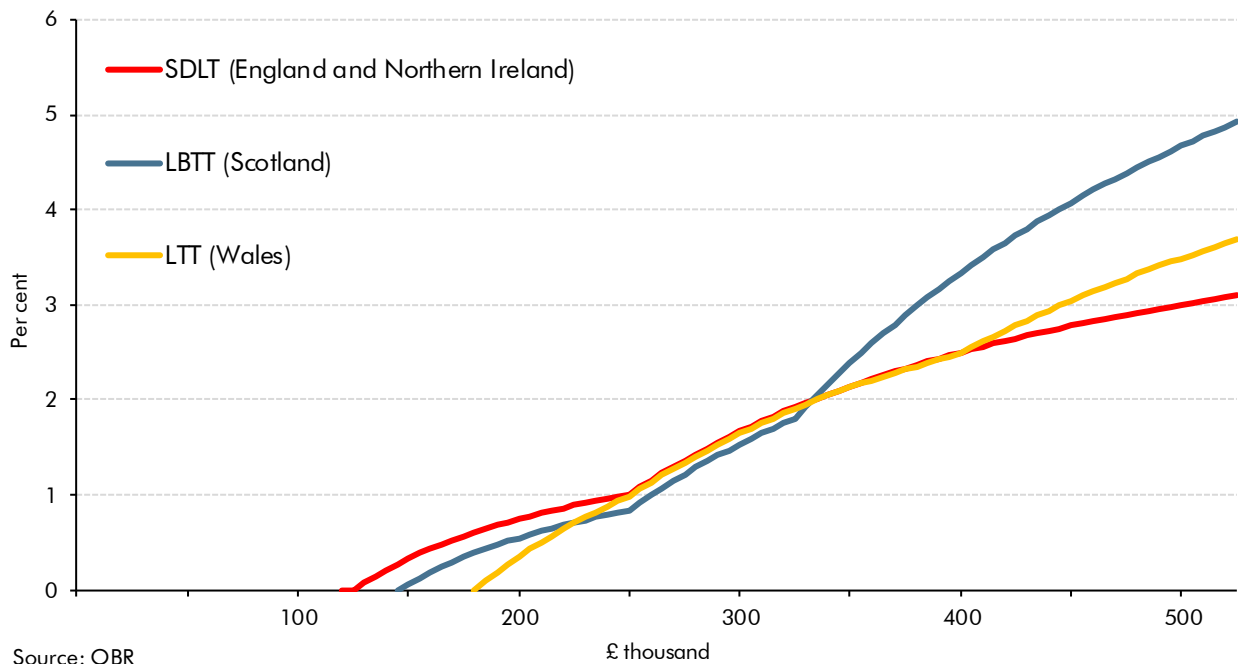
3.12 The LTT rates and thresholds for Welsh commercial property applied to leases in terms of their net present value based on their rent are:

- 0 per cent on property leases with a net present value up to £150,000;
- 1 per cent on the portion above £150,000 up to £2 million; and
- 2 per cent on the portion above £2 million.

## Comparison of the tax regimes

3.13 Chart 3.1 shows the tax schedules for the main rates on residential property in SDLT, LBTT and LTT. Compared to SDLT both LTT and LBTT are more progressive, with higher effective tax rates on more expensive transactions. This has several implications for our forecast. Since the thresholds for all three are fixed in cash terms, house price inflation will lead to transactions moving into higher tax bands, increasing the overall cost of the transaction. This is known as 'fiscal drag', which we would expect to lead to receipts rising faster than house prices over time. When compared to SDLT, the more progressive nature of LTT and LBTT will lead to greater fiscal drag as higher marginal rates apply at lower prices.

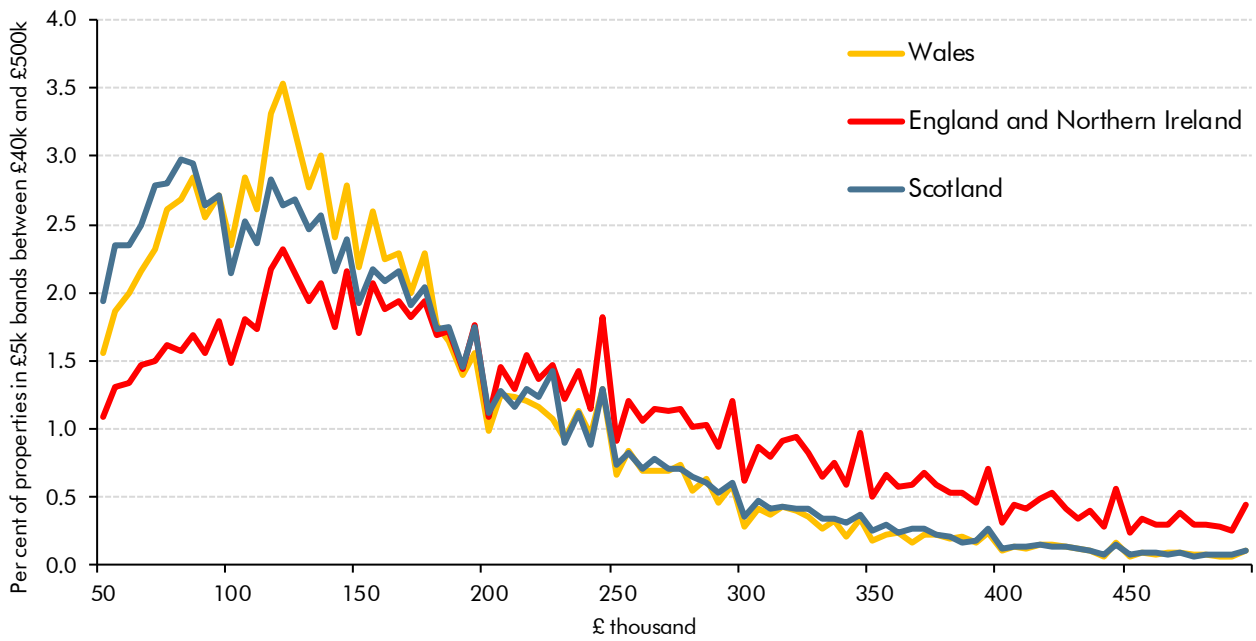
Chart 3.1: Residential property effective tax rates in the UK: main rates



3.14 Chart 3.2 compares the price distribution of residential sales in 2016-17 in Scotland and Wales with those in England and Northern Ireland combined. In all three areas transactions tend to cluster at ‘round numbers’, while in Scotland around half of transactions are below the lower LBTT threshold of £145,000. Around two-thirds of transactions in Wales are below the first LTT threshold of £180,000. This compares to around a quarter of transactions in the rest of the UK being below the £125,000 SDLT threshold.

3.15 This has further forecast implications. First, many transactions are only taxable if they are subject to the 3 per cent surcharge on additional purchases. The proportion of residential receipts from the surcharge in 2016-17 was greater in Wales (36 per cent) and Scotland (nearly 30 per cent) than in the rest of the UK (20 per cent). Second, the distribution increases the potential for fiscal drag in Wales and Scotland, as many transactions that are currently not liable to tax could become so due to house price inflation.

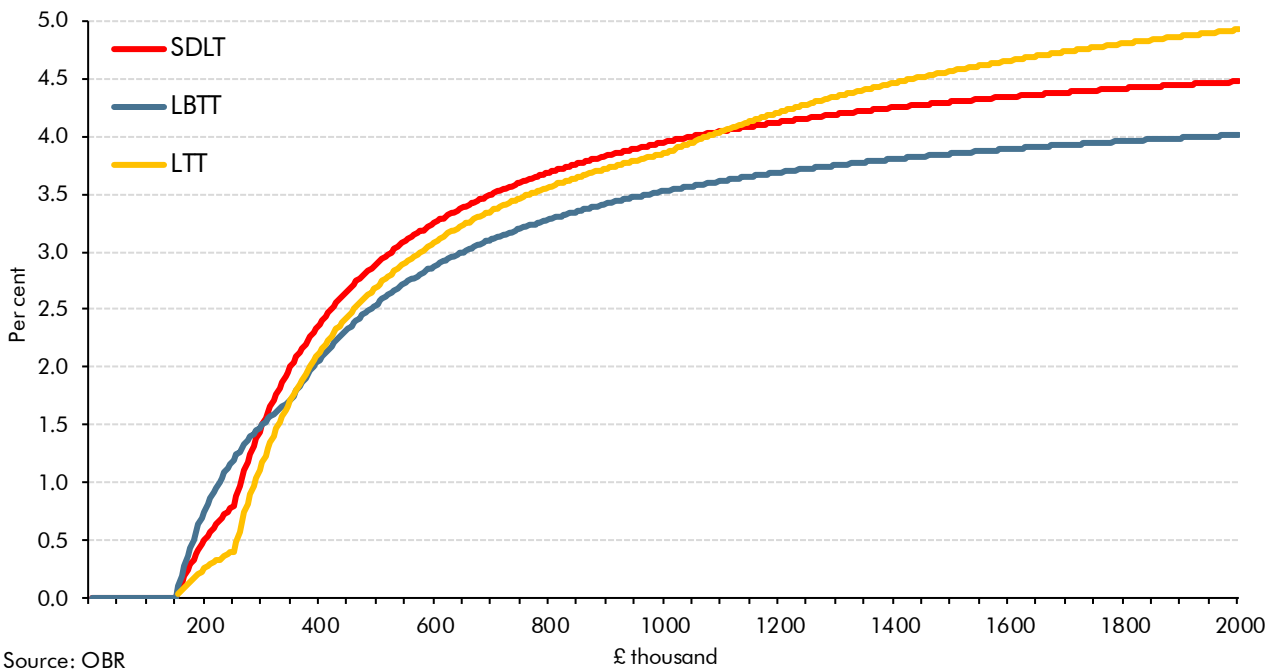
Chart 3.2: Distribution of residential transactions in 2016-17



Source: HMRC, Revenue Scotland

3.16 Chart 3.3 shows the effective tax rates for commercial property, where the differences are considerably smaller across the three tax regimes.

Chart 3.3: Commercial property effective tax rates in the UK



Source: OBR

## Methodology

- 3.17 Our forecasting approach is unchanged from November. Welsh LTT forecasts use the same microsimulation model as is used for our SDLT forecasts. This is run on our behalf by HMRC. The microsimulation applies the appropriate tax schedules for LTT and SDLT to a full sample of transactions from a given base year, which are grown in line with our property price and transactions forecasts. Our LBTT model uses mean and median price data from Registers for Scotland to calculate a log-normal distribution for the Scottish housing market, rather than using a microsimulation. This is the same method as used by the Scottish Fiscal Commission (SFC), which has published analysis showing that such a distribution provides a reasonably good fit to outturn data from Revenue Scotland.<sup>1</sup> The base data for all our main rate residential models are from 2015. Choosing a representative base year is not straightforward because multiple policy changes in recent years have distorted the pattern of transactions.<sup>2</sup> We tested new base inputs from 2016-17 and 2017-18 to date for our log-normal model, but found that they did not improve the accuracy of the in-year forecast.
- 3.18 We use separate models to forecast the additional property surcharges in each regime. Recent outturns are grown in line with prices and volumes, which are added to the main residential forecast.
- 3.19 Our forecast model for commercial LBTT grows recent outturns in line with our commercial prices and transactions forecasts. This is similar to the SFC's approach. We forecast commercial SDLT and LTT receipts with a microsimulation model based on 2016-17 data.
- 3.20 We assume that Scottish and Welsh prices and transactions grow in line with those for the UK as a whole, and that the ratio of mean to median residential prices remains constant in the LBTT log-normal distribution. While house prices are at different levels, we assume that prices neither converge nor diverge any further. We assume the house price increases from November's property measures are already feeding into in-year receipts to which we calibrate our forecasts.

## SDLT forecast

- 3.21 We have revised down SDLT receipts slightly since November. Property transactions and residential receipts have been somewhat weaker than forecast, lowering the base from which the forecast grows. Our forecast for house prices is up slightly in the short term, but down towards the end of the forecast. We have retained our judgement on additional properties that 20 per cent of initial surcharge payments will be refunded, though final outturns will not be known for some time due to the 36-month window for claims. We have also increased the costs of the first-time buyer's relief (see our main EFO for more details). Table 3.2 shows that due to our refunds assumption the liabilities forecast is slightly lower in

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<sup>1</sup> Scottish Fiscal Commission (2017) *Forecast Evaluation Report*.

<sup>2</sup> For more information see *Working Paper No. 10: Forestalling ahead of property tax changes (2016)*, available on our website.

the first years of surcharge, but once it reaches steady-state there is very little difference from 2019-20 onwards.

3.22 Our commercial forecast is little changed, with slightly weaker in-year receipts offset by slightly stronger commercial property prices and volumes.

3.23 We have made a small adjustment to our SDLT forecast in 2017-18 to account for forestalling ahead of the introduction of Welsh LTT.

Table 3.1: SDLT forecast

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Total SDLT</b>							
November forecast	11.8	13.1	13.1	13.6	14.2	15.0	15.7
March forecast	11.8	13.0	12.8	13.2	13.8	14.4	15.1
<b>Change</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.6</b>	<b>-0.6</b>
<b>Residential SDLT (excluding additional properties)</b>							
November forecast	6.9	7.8	7.7	8.1	8.5	9.0	9.6
March forecast	6.9	7.6	7.4	7.8	8.1	8.5	9.0
<b>Change</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.5</b>
<b>Additional properties</b>							
November forecast	1.7	1.9	1.8	1.9	2.0	2.1	2.2
March forecast	1.7	1.9	1.8	1.9	1.9	2.0	2.2
<b>Change</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Commercial SDLT</b>							
November forecast	3.2	3.4	3.5	3.6	3.7	3.9	4.0
March forecast	3.2	3.4	3.5	3.6	3.7	3.8	3.9
<b>Change</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.1</b>

Table 3.2: Additional properties surcharge forecast

	£ billion						
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Liabilities	1.4	1.8	1.9	1.9	2.0	2.1	2.2
National Accounts 'cash'	1.7	1.9	1.8	1.9	2.0	2.1	2.2

## Land and buildings transaction tax

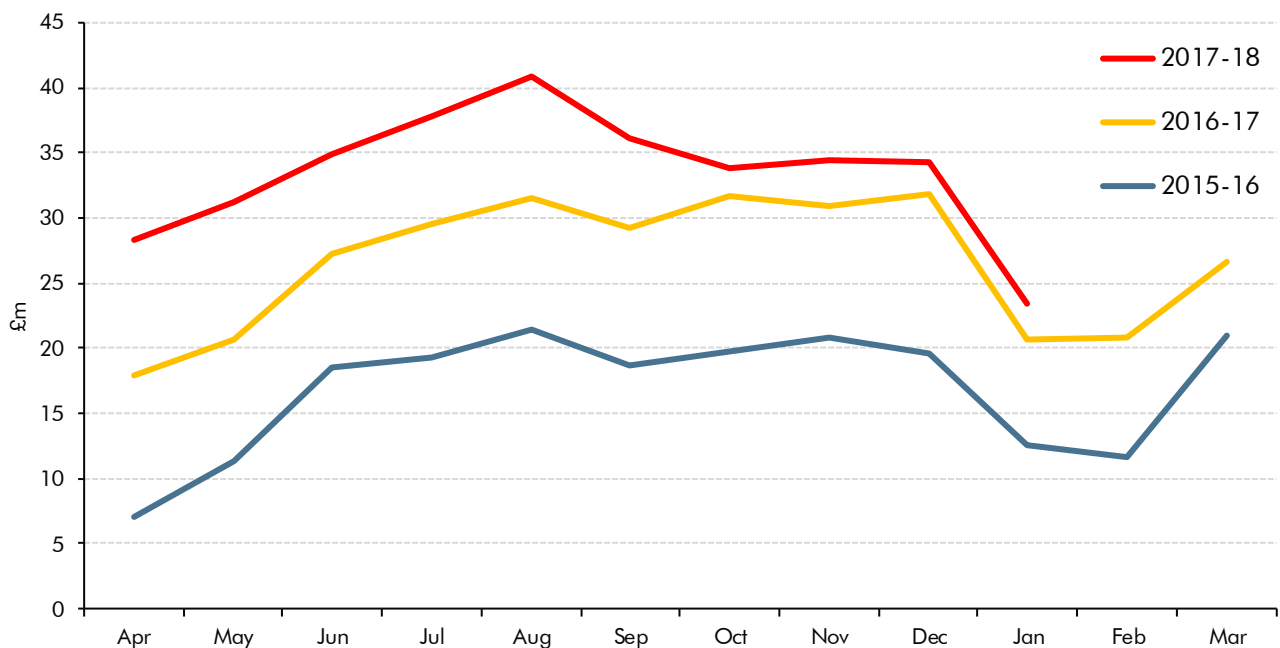
### Latest LBTT outturn data

3.24 The latest LBTT receipts data published by Revenue Scotland are presented in Charts 3.4 to 3.7.<sup>3</sup> Receipts increased from £416 million in 2015-16 to £481 million in 2016-17, more than explained by £90 million related to the ADS.

<sup>3</sup> A small amount of revenue from the additional dwelling supplement is reported in Revenue Scotland statistics as occurring from commercial transactions. We include this revenue within commercial outturn for these charts, but it is contained within residential transactions for our forecast. Throughout we use information from Revenue Scotland monthly statistics publication.

3.25 Chart 3.4 shows the monthly profile of residential receipts. This was distorted by forestalling in both 2015-16 and 2016-17. A large number of high-value residential transactions were brought forward before the April 2015 introduction of LBTT. This boosted SDLT receipts in March 2015 at the expense of LBTT receipts in the following months. The same behaviour was observed at the end of 2015-16, when buyers moved transactions forward to avoid the ADS that came into effect in April 2016. At the time of our November forecast residential receipts data in 2017-18 appeared to be substantially stronger than in both 2015-16 and 2016-17. But receipts for October 2017 to January 2018 have been notably weaker than in earlier months.

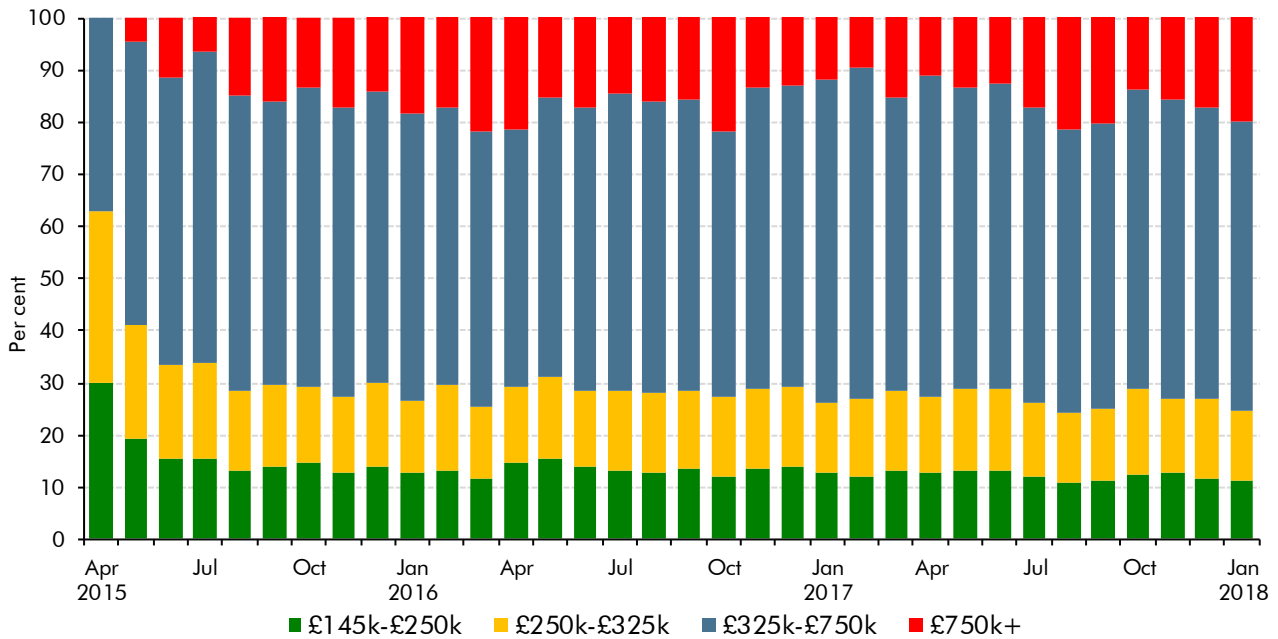
Chart 3.4: Residential LBTT including initial ADS payments but excluding refunds



Source: Revenue Scotland

3.26 Chart 3.5 shows the distribution of revenue from the main residential rates. While variation to date has not been large, we would expect a gradual rise in the proportion of transactions in the higher brackets over time as a result of house price inflation and fiscal drag.

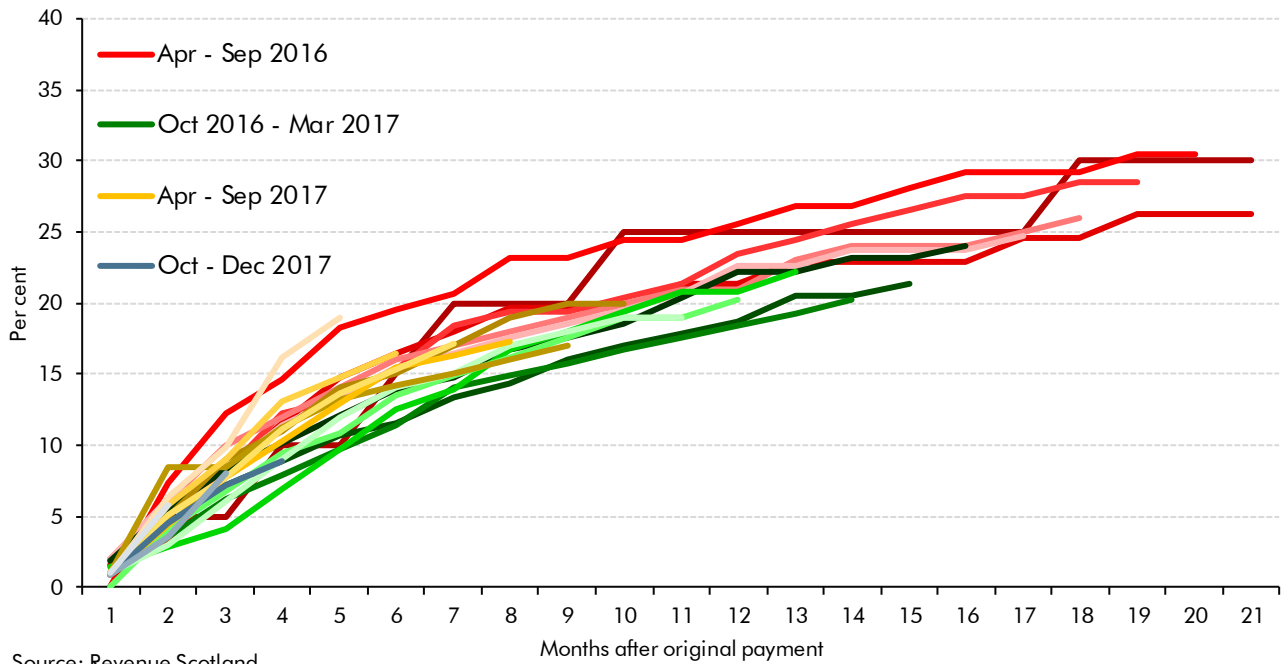
Chart 3.5: LBTT residential revenue excluding the ADS by price band



Source: Revenue Scotland

- 3.27** Receipts from the ADS have come in slightly weaker than expected since our November forecast. Subsequent refunds have also been slightly higher. Revenue Scotland publishes cohort specific information on refunds, which is shown in Chart 3.6. This shows that some early cohorts will ultimately see more than 25 per cent of receipts refunded, higher than our steady-state assumption. We believe the early cohorts may overstate the steady-state refund percentage given the forestalling that took place during this period, but will keep this assumption under review.
- 3.28** The Scottish Government has announced more generous criteria for claiming a refund for joint buyers. Given the uncertainties around the steady-state we have not adjusted our forecast at this stage.

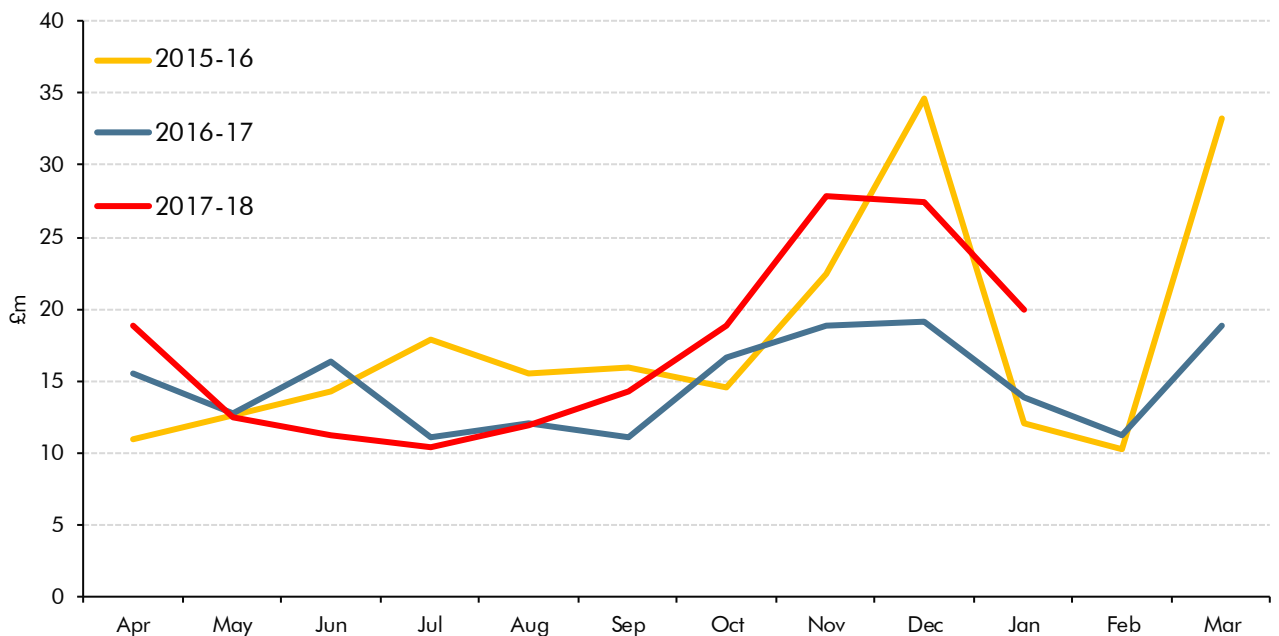
Chart 3.6: LBTT additional dwelling supplement refunds by cohort



Source: Revenue Scotland

3.29 Chart 3.7 shows the monthly profile of commercial LBTT receipts. In the period to October, 2017-18 receipts followed a similar trend to the previous year, but they have been picked up over the last three months. The monthly profile can be distorted by a small number of very large transactions, which seems to have been the case in these months.

Chart 3.7: Commercial LBTT



Source: Revenue Scotland



## LBTT forecast

- 3.30** Table 3.3 shows our latest forecasts for residential and commercial LBTT. Relative to November the overall forecast is slightly higher from 2017-18 to 2019-20 but progressively lower thereafter. By 2022-23 we expect total LBTT receipts to be 53 per cent higher than in 2016-17. Given the progressive rate structure of the residential LBTT regime, price increases lead to rapid growth in receipts, with residential receipts excluding ADS are still forecast to rise by 80 per cent between 2016-17 and 2022-23.
- 3.31** After recording the highest level of LBTT receipts to date in August 2017, residential receipts have weakened in recent months. Consequently, we have revised down our 2017-18 estimate for receipts from the main residential rates of LBTT from £276 million to £257 million. This feeds through the forecast.
- 3.32** For commercial LBTT, the stronger-than-expected outturns in recent months combined with slightly higher forecasts for price and volumes growth leads to higher revenue growth than for residential LBTT. We have revised up our 2017-18 estimate from £179 million to £208 million. This feeds through the forecast. Receipts are expected to rise by 30 per cent between 2016-17 and 2022-23, though much of this growth reflects strength in 2017-18.

**Table 3.3: Land and buildings transaction tax forecast**

	£ million						
	Outturn 2016-17	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	
<b>Total LBTT</b>							
November forecast	481	553	581	617	656	701	748
March forecast	481	561	586	619	653	692	736
<b>Change</b>	<b>0</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>-3</b>	<b>-9</b>	<b>-12</b>
<b>Residential LBTT (excluding ADS)</b>							
November forecast	214	276	299	326	354	388	427
March forecast	214	257	278	300	323	351	386
<b>Change</b>	<b>0</b>	<b>-19</b>	<b>-21</b>	<b>-25</b>	<b>-30</b>	<b>-37</b>	<b>-41</b>
<b>Additional dwellings supplement (ADS)</b>							
November forecast	90	99	102	108	113	118	125
March forecast	90	96	99	103	108	113	119
<b>Change</b>	<b>0</b>	<b>-3</b>	<b>-4</b>	<b>-4</b>	<b>-5</b>	<b>-6</b>	<b>-6</b>
<b>Commercial LBTT</b>							
November forecast	177	179	180	183	190	195	196
March forecast	177	208	210	216	222	229	230
<b>Change</b>	<b>0</b>	<b>30</b>	<b>30</b>	<b>32</b>	<b>32</b>	<b>34</b>	<b>34</b>

- 3.33** Table 3.4 breaks down the changes in our residential LBTT forecast since November. The largest comes from weaker in-year data. House price inflation increases receipts in the short term but receipts are weaker towards the end of the forecast. The Scottish Government's first-time buyers' relief has a modest effect reducing receipts.

Table 3.4: Changes in residential LBTT since November

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	304	375	401	433	466	506	552
March forecast	304	353	376	403	431	463	505
<b>Change</b>		<b>-22</b>	<b>-25</b>	<b>-30</b>	<b>-35</b>	<b>-43</b>	<b>-46</b>
<i>of which:</i>							
Receipts outturn main residential		-22	-22	-22	-22	-22	-22
Receipt outturn ADS		-3	-3	-3	-3	-3	-3
House prices		5	13	10	4	-5	-12
Property transactions		-2	-7	-7	-6	-5	-1
SG first time buyers relief		0	-6	-7	-7	-7	-7
Other changes		-1	-1	-1	-2	-2	-2

Table 3.5: ADS forecast under different accounting treatments

	£ million						
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Liabilities	78	94	98	103	107	112	118
National Accounts 'cash'	90	96	99	103	108	113	119

3.34 Table 3.6 breaks down the revisions to our commercial LBTT forecast since November. The main changes are from stronger-than-expected receipts this year. Prices and transactions also have also lifted receipts a little throughout the forecast.

Table 3.6: Changes in commercial LBTT since November

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	177	179	180	183	190	195	196
March forecast	177	208	210	216	222	229	230
<b>Change</b>		<b>30</b>	<b>30</b>	<b>32</b>	<b>32</b>	<b>34</b>	<b>34</b>
<i>of which:</i>							
Receipts and modelling		26	26	28	28	30	30
Property prices		2	2	3	2	2	2
Property transactions		2	2	2	2	2	2

## Comparison with SFC forecasts

3.35 The SFC published its first LBTT forecast in December 2017. Our latest forecast is more optimistic about commercial receipts, but more pessimistic about residential receipts. But the difference between our forecasts is less than 3 per cent, which is small relative to the uncertainty that surrounds either of them. Property transactions taxes are one of the most volatile revenue streams, so forecasts for them are subject to considerable uncertainty.<sup>4</sup>

<sup>4</sup> See Box 3.1 of our 2016 *Forecast evaluation report* for more information on forecasting property transaction taxes.

- 3.36 Modelling changes incorporated in our November forecast reduces the extent to which our forecasting approach differed from that used by the SFC. Nevertheless our forecasts will normally be based on different outturn data and we may still make different assumptions and judgements. We may also need to reflect different policy baselines, for example if there have been announcements made between our respective forecasts being published.
- 3.37 One source of difference is likely to be our forecasts for house prices. Our UK house price forecast is linked to many components of our economy forecast, such as household income growth and interest rates. And while our starting point is for different Scottish house prices, we assume that they will rise at the same rate as house prices in the rest of the UK. Given the importance of house prices for LBTT receipts, differences in this input to our respective forecasts are likely to be important. The SFC's approach places greater weight on Scottish specific trends in prices, but with a weaker link to the forecast for the wider economy.

Table 3.7: Comparison between Scottish Fiscal Commission and OBR forecasts

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017	557	588	628	668	707	748
OBR March 2018 forecast	561	586	619	653	692	736
<b>Difference</b>	<b>5</b>	<b>-2</b>	<b>-9</b>	<b>-15</b>	<b>-15</b>	<b>-12</b>
<i>of which:</i>						
Residential	-10	-22	-31	-36	-38	-30
Commercial	15	20	22	21	22	18

## Welsh SDLT and LTT forecasts

- 3.38 Our Welsh residential SDLT and LTT forecasts are both produced using a microsimulation model and our UK-wide property price and transactions forecasts. The base years for the forecast are unchanged from November. We initially produce a Welsh forecast based on SDLT rates and thresholds, then adjust it for the latest LTT rates and thresholds.
- 3.39 Our overall forecasts for Welsh SDLT and LTT is set out in Table 3.8.

Table 3.8: Welsh SDLT and LTT forecasts

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Total SDLT / LTT</b>							
November	208	241	252	271	293	315	338
March	209	258	264	282	302	322	346
<b>Change</b>	<b>0</b>	<b>17</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>7</b>	<b>7</b>
<b>Residential (excluding additional properties)</b>							
November	89	106	112	123	136	154	171
March	89	106	106	116	127	143	158
<b>Change</b>	<b>0</b>	<b>1</b>	<b>-6</b>	<b>-7</b>	<b>-9</b>	<b>-11</b>	<b>-13</b>
<b>Additional properties</b>							
November	51	55	54	57	59	62	65
March	51	57	55	58	60	62	66
<b>Change</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Commercial</b>							
November	69	80	86	91	97	99	103
March	69	95	102	108	115	117	122
<b>Change</b>	<b>0</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>18</b>	<b>19</b>

*Shaded cells represent notional estimates for years when SDLT devolution has not occurred.*

3.40 Table 3.9 breaks down the changes in our residential forecast since November. House prices are higher in the near term, but lower towards the end of the forecast, while the recent weakness in transactions is largely pushed through the forecast.

Table 3.9: Changes in residential Welsh SDLT and LTT since November

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	140	161	167	180	195	216	236
March forecast	140	163	162	174	187	205	224
<b>Change</b>	<b>0</b>	<b>2</b>	<b>-5</b>	<b>-6</b>	<b>-8</b>	<b>-11</b>	<b>-12</b>
<i>of which:</i>							
House prices		1	4	3	1	-2	-4
Property transactions		-1	-2	-3	-2	-2	-1
WG policy - LTT rates and bands		0	-7	-7	-7	-8	-8
Receipts and other modelling		2	0	1	0	0	1

*Shaded cells represent notional estimates for years when SDLT devolution has not occurred.*

3.41 In December 2017, the Welsh Government announced an increase in the lower residential threshold for LTT from £150,000 to £180,000 but also increased the marginal rate up to £250,000. To estimate the effect of this change on receipts, we used the same method as employed in November when we costed the original parameters of LTT. First, we estimated a static costing by applying the latest LTT rates to the existing taxpayer distribution under SDLT in our baseline forecast. We then adjusted for behavioural effects using our standard

elasticities for the effect of tax changes on house prices and transactions.<sup>5</sup> Table 3.10 shows the estimated effect on receipts from the December 2017 changes.

3.42 The Welsh Government has informed us that the Welsh Revenue Authority is expected to be fully operational from 1 April 2018 to collect and report on the new tax.

**Table 3.10: Receipts effect of policy changes announced since our November forecast: residential LTT in Wales**

	£ million						
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Liabilities	40	54	56	57	60	62	66
National Accounts 'cash'	51	55	54	57	59	62	65

3.43 Table 3.11 shows our Welsh additional properties forecast on both a liabilities and a National Accounts basis. It shows the cash and liabilities from taxes property transactions in Wales.<sup>6</sup> For the additional properties surcharge we have assumed the same refund profile for Welsh LTT as for SDLT in the rest of the UK at 20 per cent of the initial value. Relative to England, the private-rental sector in Wales is proportionately smaller, which could point to greater refunds (as in Scotland). But in parts of Wales there are relatively high levels of second 'holiday home' ownership, which could point to fewer refunds. As with our other additional property forecasts, we will keep the 20 per cent assumption under review.

**Table 3.11: Additional properties forecast under different accounting treatments**

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Static costing		-6.9	-7.3	-7.7	-8.4	-9.1
Price and transactions effect		-0.1	0.3	0.3	0.5	0.6
Forestalling effect	-0.4	0.2				
<b>Post-behaviour costing</b>		<b>-6.8</b>	<b>-7.0</b>	<b>-7.4</b>	<b>-8.0</b>	<b>-8.5</b>

*Shaded cells represent notional estimates for years when SDLT devolution has not occurred.*

3.44 Table 3.12 shows the changes in our Welsh commercial SDLT forecast since November. Receipts in Wales in the final months of 2017 were considerably stronger than expected. A slightly stronger forecast for the commercial property market also results in a small increase in commercial LTT receipts. Commercial LTT receipts are likely to be volatile due to the potential for a small number of high-value transactions to distort the profile. The Welsh Government has not made any policy changes to commercial LTT since our November forecast.

<sup>5</sup> We published updated property transaction tax behavioural elasticities on our website alongside our 2017 *Forecast evaluation report*.

<sup>6</sup> This is not split by SDLT and LTT. From April 2018 onwards there will be negative SDLT from repayments on transactions that completed before 1 April which to an extent will be offset by LTT refunds not reaching steady-state. Similarly there is normally a short lag between the liability being generated from a transaction completing and the receipts being received. In April 2018 tax on Welsh property transactions will be split between SDLT (from transactions completing just before 1 April) and LTT (transactions completing afterwards). It is also possible the lag could change as a result of the filing and collection arrangements set up by the Welsh Revenue Authority which could alter the profile of receipts. We have not adjusted our forecasts for these effects.

Table 3.12: Changes in commercial Welsh SDLT and LTT since November

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	80	86	91	97	99	103
March forecast	95	102	108	115	117	122
<b>Change</b>	15	16	17	17	18	19
<i>of which:</i>						
Receipts outturn	13	14	15	16	17	17
Property market determinants	2	2	2	2	2	2
Other modelling	0	0	0	0	0	1

*Shaded cells represent notional estimates for years when SDLT devolution has not occurred.*

### Comparison with the Welsh Government LTT forecast

- 3.45 The Welsh Government published its own forecasts that were independently scrutinised by academics at Bangor University. In broad terms, the Welsh Government has used similar modelling techniques to those that we employ. The model aggregates transactions within relatively small price bands, calculating the tax due on the average price in the band and then projecting that forward in line with our forecasts for prices and transactions.
- 3.46 There are several differences between the forecasts produced by the Welsh Government and our own. First, the Welsh Government's forecast drew on our November 2017 forecast for some economy and receipts inputs and does not account for the stronger-than-expected commercial receipts in recent months. Second, the Welsh Government focused on the impact of the tax change on its own spending power and assumed that the SDLT from transactions brought forward into 2017-18 would be offset by a block grant adjustment. Finally, the Welsh Government's forecast is on a liabilities basis whereas ours is consistent with the treatment of these receipts in the National Accounts.

Table 3.13: Comparison between Welsh Government and OBR LTT forecasts

	£ million			
	2018-19	2019-20	2020-21	2021-22
Welsh Government December	250	269	288	310
OBR March	264	282	302	322
<b>Difference</b>	14	13	14	12
<i>of which</i>				
Residential	-1	-6	-8	-9
Commercial	16	19	22	21

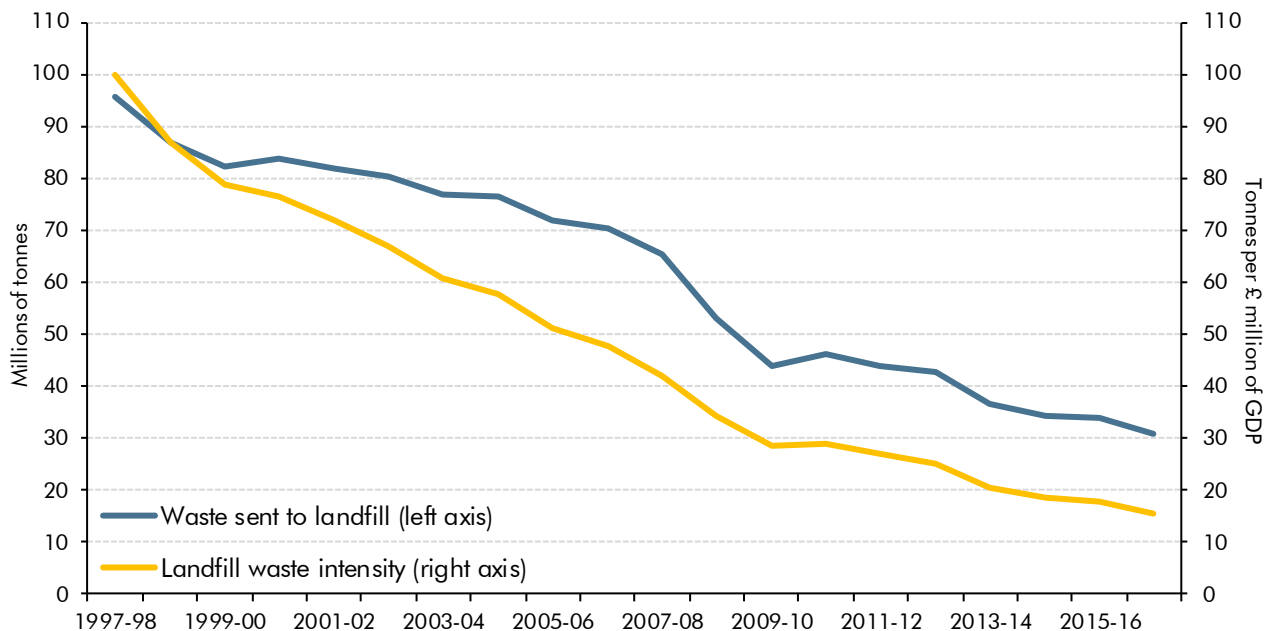
# 4 Environmental and transport taxes

## Landfill tax

### Trends in UK landfill tax receipts

- 4.1 Landfill tax was introduced in 1996. It applies to all waste disposed of by way of landfill at a licensed site unless the waste is specifically exempt. Our forecasts for landfill tax is driven by the tax base (the amount of waste sent to landfill) and the effective tax rate that will be paid (largely driven by policy decisions on rates, but also by the composition of waste sent to landfill as there are two different rates). Both elements represent sources of uncertainty.
- 4.2 As Chart 4.1 shows, the volume of waste sent to landfill has been on a declining trend, both in absolute terms and per unit of real GDP (a proxy for the activity that generates waste). The volume of standard-rated waste,<sup>1</sup> which is subject to a much higher rate and accounts for over 95 per cent of receipts, has fallen too. In 2016-17, less than half the waste sent to landfill was subject to the standard rate.

Chart 4.1: UK landfill waste tonnage relative to economic activity

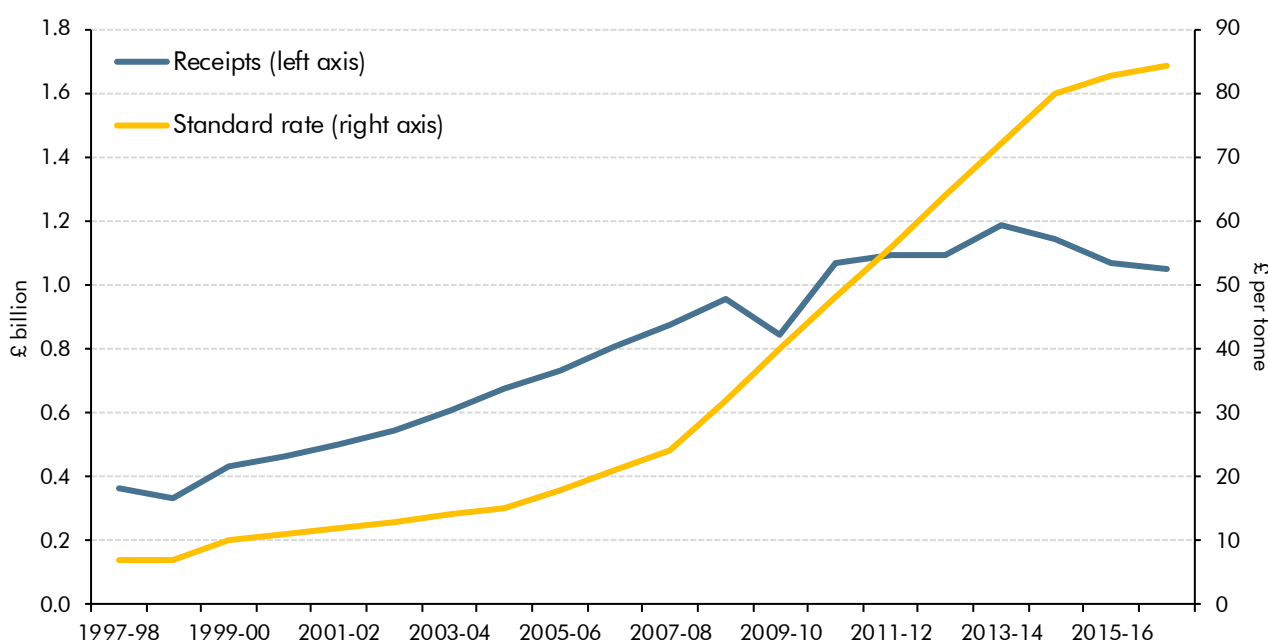


Source: HMRC, Revenue Scotland, ONS, OBR

<sup>1</sup> The standard rate is the default category for waste sent to landfill. Lower rated and exempt waste is broadly 'low polluting and non-hazardous' waste such as rocks, sands and other low activity inorganic materials.

4.3 Since landfill tax was introduced, there has been a clear downward trend in the amount of waste sent to landfill in the UK, falling from 96 million tonnes in 1997-98 to 31 million in 2016-17, which is in part due to the increasing levels of tax. Chart 4.2 shows landfill tax revenue collected by HMRC and Revenue Scotland between 1997-98 and 2016-17. The standard rate has risen from £7 a tonne in 1997-98 to £84.40 for 2016-17, with the same rates levied in both Scotland and the rest of the UK. So despite a declining tax base, receipts increased significantly for the first 15 years. But receipts have fallen in the past two years, reflecting smaller increases in the standard rate, while the tax base has continued to decline.

Chart 4.2: UK landfill taxes standard rate and receipts



Source: HMRC, Revenue Scotland

### Scottish rate

4.4 Scottish landfill tax replaced the UK equivalent in Scotland with effect from April 2015. The Scottish Government has so far set rates that match those in the rest of the UK. Contributions to the Scottish landfill communities fund are slightly more generous than those for the equivalent fund in the rest of the UK, but the fiscal effects of this are small.

### Welsh rate

4.5 Landfill tax in Wales will be replaced with Landfill Disposals Tax (LDT) from April 2018. In October 2017 the Welsh Government announced that it intends to match the UK rates for the first two years of the tax, while also introducing a new tax rate for waste disposed of at illegal sites, known as the 'unauthorised disposals rate'. This will be charged at 150 per cent of the standard rate.

4.6 The Welsh Government will also operate a landfill communities fund, but this will operate as a grant rather than the tax credit system currently used by the UK Government.



## Methodology

- 4.7 In our November forecast the Scottish and Welsh landfill tax forecasts were produced by applying an assumption about the path of the Scottish and Welsh landfill tax relative to the rest of the UK, with the Scottish landfill tax forecast also taking into account the latest receipts data from Revenue Scotland.
- 4.8 We have revised our methodology for forecasting Scottish landfill tax to use the same model as that developed by the Scottish Fiscal Commission (SFC). The SFC model is structured in a similar way to the model operated on our behalf by HMRC to forecast landfill tax receipts in the rest of the UK. Both start with assumptions about the growth in waste arising and potentially landfilled, reduce that for factors like incineration due to come online, before calculating receipts by applying the forecast tax rates to the forecast residual tonnage that is assumed to enter landfill. The SFC model has the benefit of using more Scottish specific information and assumptions. We are grateful to the SFC for sharing its model with us and for explaining its properties and operation.
- 4.9 We maintain our methodology for forecast Welsh LDT revenues of assuming they are a constant share of the forecast for the rest of the UK. There are no readily available administrative data on the Welsh share of UK landfill tax receipts, since landfill operators currently submit returns that cover sites across England, Wales and Northern Ireland. The Welsh share of receipts in the current year is therefore inferred from data collected by Natural Resources Wales on waste sent to landfill in Wales.
- 4.10 The tax rates are assumed to be raised in line with RPI inflation each year, consistent with the Governments' default indexation assumptions.
- 4.11 We add the effect of any new policy measures to produce our post-measures forecast.

## UK Government landfill tax forecast

- 4.12 Table 4.1 shows our latest forecast for UK Government landfill tax on a liabilities basis. It includes receipts from Welsh sites in 2017-18 but not thereafter. The forecast has increased in the short-term but return to a very similar level as in November by the end of the forecast period.
- 4.13 Since November in-year receipts have been stronger than expected, which has been pushed through the forecast. But changes to the relevant HMRC accounting system have led to a timing effect by changing the monthly profile of payments, which reduces receipts in 2017-18 and raises them in 2018-19.
- 4.14 Our forecast of waste exports has changed the profile of receipts, which increase them in the near term but reduce them in the medium term. New modelling from DEFRA suggests that waste exports, primarily to European countries, are likely to increase towards the end of the forecast. In addition, in January 2018 China brought in a ban on the import of some types of waste – notably plastics. The effect of this is highly uncertainty but it may result is

some additional waste being landfilled in the UK as the Chinese ban will affect waste export markets worldwide. We assume other export markets will eventually replace China but may need some time to develop the necessary infrastructure. We have therefore made a small adjustment to the UK forecast for landfill receipts in 2018-19 and 2019-20.

Table 4.1: UK Government landfill tax forecast – liabilities basis

	£ million						
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	843	697	611	558	517	492	465
March forecast	843	699	684	594	526	506	463
<b>Change</b>	<b>0</b>	<b>3</b>	<b>73</b>	<b>36</b>	<b>8</b>	<b>14</b>	<b>-2</b>
of which:							
In-year receipts		25	24	24	24	24	24
Non-China exports		0	0	-8	-18	-28	-38
China exports			24	24			
Other modelling		-22	25	-4	2	17	12

## Scottish landfill tax receipts in 2017-18

4.15 Revenue Scotland publishes quarterly receipts data. The latest publication was after our November forecast. It shows receipts in the first half of 2017-18 were down 3.6 per cent on a year earlier, and only 1.8 per cent down in the second quarter. In November we assumed that receipts in 2017-18 as a whole would be 5 per cent lower than in 2016-17. We have therefore revised up 2017-18 receipts slightly from £140 million to £142 million. Landfill tax receipts are normally spread quite evenly across the year, so we would expect this part-year information to provide a reasonable guide to the year as a whole.

## Scottish forecast

4.16 Table 4.2 sets out our forecast for Scottish landfill tax receipts, which has been revised down since November.

4.17 As noted above, we have changed our forecast method to use the model developed by the SFC. This results in reduction in our forecast. This is primarily due to incorporating a Scottish-specific infrastructure forecast from the SFC, itself based on information from the Scottish Environment Protection Agency. The profile suggests a much larger increase in Scottish capacity coming online in 2018-19 than in the rest of the UK, where growth is more gradual. The SFC model also allows for a Scottish-specific recycling trend, and we now assume in recycling in Scottish forecast continues to improve – in contrast to our assumption for the rest of the UK. The effect of a continuing increase in recycling rates is a modest reduction in receipts of less than £5 million.

4.18 Unlike our UK forecast, the SFC model does yet not capture exports diverting waste from landfill. We have not adjusted our Scottish forecast for a changing pattern of waste exports. Overall this may pose some downside risk to the forecast – though as noted above the profile of the risk may not be constant across the forecast. But we feel it is balanced by the

possibility of delays in Scottish waste infrastructure coming online, in particular given the large expansion factored into the forecast in 2018-19.

Table 4.2: Scottish landfill tax forecast

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	148	140	123	108	101	95	90
March forecast	148	142	111	93	94	86	84
<b>Change</b>	<b>0</b>	<b>2</b>	<b>-11</b>	<b>-15</b>	<b>-7</b>	<b>-9</b>	<b>-6</b>
of which:							
Change to SFC model			-33	-32	-17	-21	-14
In-year receipts and other modelling		2	22	17	10	12	8

4.19 The SFC published its first landfill tax forecast in December 2017. The latest receipts data were not available then, which partly explains the starting difference in our forecasts. The difference reduces toward the end of the forecast due to other judgements. In our forecasts we grow waste arising in line with the Scottish population, consistent with our forecast for the rest of the UK, while the SFC use GDP and household consumption. This helps to explain the smaller cumulative fall between 2017-18 and 2022-23 in the SFC's forecast relative to ours. We plan to work with the SFC on the effect of waste exports on Scottish landfill.

Table 4.3: Comparison to Scottish Fiscal Commission forecast

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017	137	106	88	90	82	82
OBR March 2018	142	111	93	94	86	84
<b>Difference</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>

4.20 Neither of our forecasts currently make any allowance for the Scottish Government's legislated ban on biodegradable municipal waste being landfilled from January 2021. The SFC stated they will only include it once a sufficient evidence base has been developed to understand the profile of waste diverted from landfill. We take the same approach. If the Scottish Government announces further policies detailing how reductions in landfill tonnage are to be achieved, backed by robust evidence, we would factor these into our forecast too. For now, we note the ban, and the general aspiration of Scottish Government to reduce landfill tonnages, as downside risks to this forecast.

## Welsh forecast

4.21 Our November 2016 *Devolved taxes forecast* publication described a large downward revision to the starting point of our Welsh forecast that was based on Welsh Government analysis of data held by Natural Resources Wales covering 2015-16. In November 2017 the Welsh Government updated this analysis for 2016-17. It suggested that the Welsh share

of UK receipts remained fairly flat in 2016-17. We have used the same method as in November and assumed the average share from 2015-16 and 2016-17 (3.8 per cent) as the basis for this forecast. Table 4.4 sets out our forecast for landfill tax receipts in Wales in 2017-18 and for land disposal tax (LDT) receipts thereafter. Given our methodology the changes in the UK landfill forecast feeds through directly into the LDT forecast.

- 4.22 There are many risks around our central forecast. To the downside, recycling rates improving faster in Wales than in England and the Welsh Government’s aspiration to eliminate landfill as far as possible.
- 4.23 To the upside, the Welsh Government intends to replace the tax credit for the landfill communities fund with grants, which will lead to higher reported tax revenue (offset by higher spending). We were also informed by the Welsh Government that one large exporter had recently lost its export license, leading to more waste at risk of being landfilled.
- 4.24 Finally, there are more general uncertainties that could go in either direction. Our UK forecast has been affected by timing issues related to HMRC’s accounting systems. It is not clear whether the pattern of receipts will differ when the tax is collected by the Welsh Revenue Authority. The LDT forecast is also likely to be more volatile generally than our UK-wide forecast given the relatively smaller tax base, which means that the completion of waste treatment infrastructure sites could lead to proportionately larger drops in receipts.
- 4.25 We have not adjusted our forecast for any of these risks as we believe they are likely to be relatively small. In the absence of further evidence we therefore assume they net out. Once actual outturn receipts are available we will revisit our LDT forecasting methodology.

Table 4.4: Welsh share of landfill tax and LDT forecast

	£ million						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	32	26	23	21	19	18	17
March forecast	32	27	27	23	21	20	18
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>

*Shaded cells represent notional estimates for years when tax devolution has not occurred.*

- 4.26 The Welsh Government published its latest four-year forecast of LDT in December 2017. This deploys a separate ‘bottom-up’ forecasting model. Our forecasts are very similar, which is to be expected as we used the same assumptions about the starting point. We will consider switching to using the Welsh Government’s model once outturn receipts are available that enable us to evaluate its performance.

Table 4.5: Comparison to the Welsh Government forecast

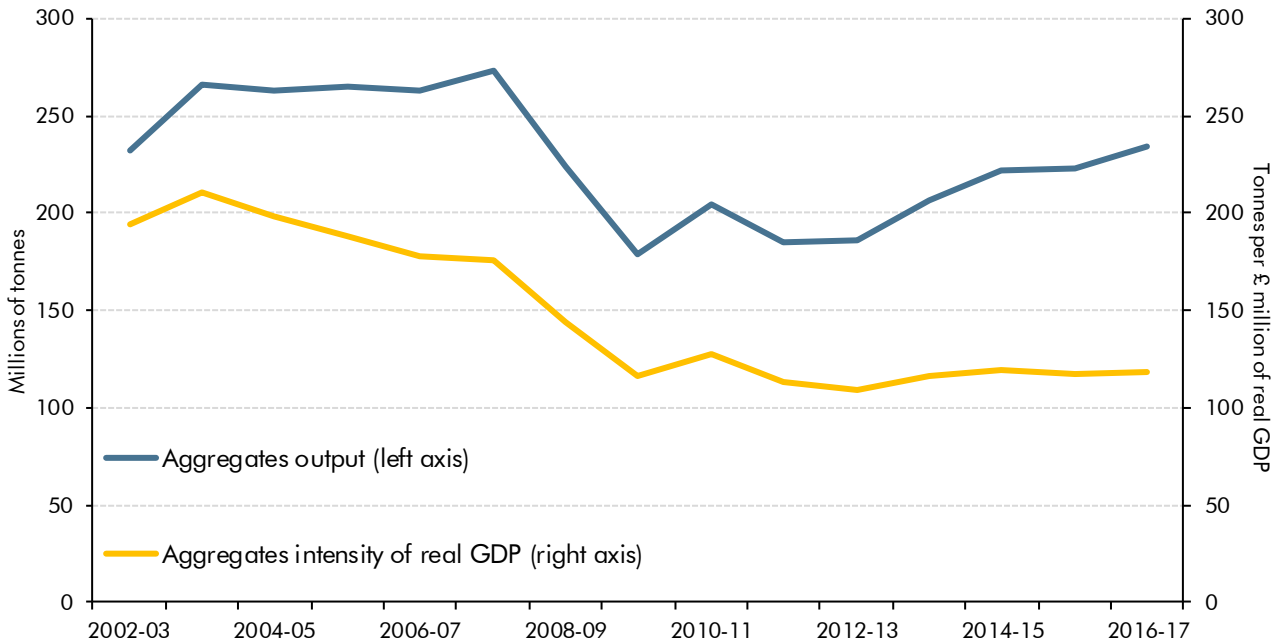
	£ million			
	2018-19	2019-20	2020-21	2021-22
WG December 2017	26	24	21	20
OBR March 2018	27	23	21	20
<b>Difference</b>	<b>1</b>	<b>-1</b>	<b>0</b>	<b>0</b>

## Aggregates levy

### Trends in UK aggregates levy receipts

- 4.27 The aggregates levy is a tax on the commercial exploitation in the UK of rock, sand and gravel. It is due from any business that quarries, dredges or imports these products. The levy came into effect in 2002. Our forecast for UK aggregates levy receipts is driven by the tax base (the volume of aggregates exploited) and the effective tax rate that will be paid (largely driven by policy decisions on the rates paid, but also by the composition of the tax base as some aggregates are relieved or exempt from the levy). The tax base represents the main source of uncertainty in the forecast, while the levy rate is subject to policy risk.
- 4.28 Since aggregates are largely an input into broader economic activity, we would expect the growth in the tax base to be associated with GDP growth. And since the tax is paid on the volume of aggregates (per tonne), the relationship should be with real GDP. As Chart 4.3 shows, that relationship has been one of relatively stable volumes of aggregates per unit of real GDP, with a shift in the level during the late 2000s recession that has persisted. Since the aggregates levy was introduced, output in absolute terms was relatively stable during the pre-crisis period, and then fell sharply in 2009-10. It was relatively stable again until 2012-13, but the latest data suggest it has picked up since then.

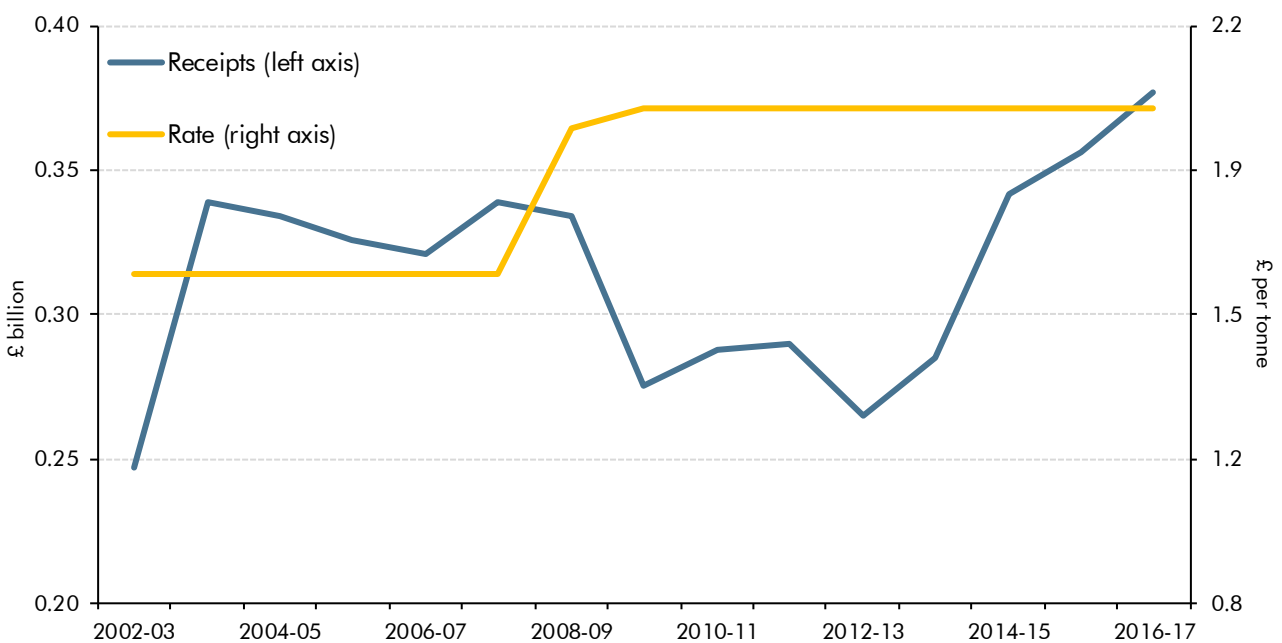
Chart 4.3: UK aggregates output relative to economic activity



Source: HMRC, ONS, OBR

4.29 As Chart 4.4 shows, aggregates levy receipts fell significantly after 2008-09 but have now risen above their pre-crisis levels in cash terms. The increases in the rate per tonne in 2008-09 and 2009-10 were not sufficient to offset the fall in the tax base in 2009-10. While the UK Government’s stated indexation policy is to increase the aggregates levy rate each year by RPI inflation, it has actually been frozen at £2 per tonne since 2009-10. Indeed, in the 16 years since its inception the rate has only been increased twice.

Chart 4.4: UK aggregates levy rate and receipts



Source: HMRC, OBR

## Scottish and Welsh rates

4.30 The UK Government has legislated to devolve the aggregates levy to Scotland and has committed to keeping devolution of the aggregates levy to Wales under review. The levy is currently subject to legal challenge in the European courts. Devolution will not take place until this has been resolved. Our forecasts are therefore illustrative since we do not know when devolution will actually take place.

## Methodology

- 4.31 The UK forecast is generated from a projection of the tax base that is multiplied by the tax rate. An econometric model relates the duty rate, seasonal effects and a time trend, allowing for recycled aggregates to increase over time and for substitution away from the extraction of primary aggregates. The tax rate is assumed to be updated by RPI inflation, consistent with the UK Government's default indexation policy. As noted, this represents a source of policy risk since the rate has in fact been frozen every year since 2009-10.
- 4.32 The Scottish and Welsh shares of aggregates levy are not directly available from tax data, since taxpayers submit returns that cover all their operations across the UK. We use HMRC's estimates of relevant aggregates production in Wales and Scotland, which are based on data from the 'UK minerals yearbook' (set out in Table 4.6). The latest available information relates to 2014-15. Aggregates tonnage across the UK fell 27 per cent between 2007-08 and 2014-15, with the decline greater in Scotland (41 per cent) and Wales (38 per cent).
- 4.33 There are small differences between the total UK tonnage reported in the yearbook and that in HMRC's statistics based on tax returns, but it appears to be the best data source available. The Scottish Government bases its estimates on data from the yearbook in its 'Government Expenditure and Revenue Scotland' (GERS) publication. To produce the Scottish and Welsh forecasts, we apply the latest estimated share to the UK forecast.

Table 4.6: Aggregates tonnage in the UK as reported in the UK minerals yearbook

	Tonnes (million)							
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
England	140.1	136.8	106.2	95.4	104.8	95.9	99.1	113.3
Scotland	37.2	32.3	28.4	28.6	27.5	24.8	22.2	24.9
Wales	20.8	18.0	12.2	12.6	13.6	12.3	13.0	16.4
Northern Ireland	6.7	5.3	4.8	3.9	20.0	18.4	17.9	16.8
UK	204.8	192.5	151.6	140.5	165.9	151.4	152.3	171.4
	Per cent of UK total							
Scotland	18.2	16.8	18.7	20.3	16.6	16.4	14.6	14.5
Wales	10.2	9.4	8.1	9.0	8.2	8.1	8.5	9.6

4.34 Finally, we add the Scottish and Welsh element of any policy measures to produce the post-measures forecast.

## UK forecast

4.35 Table 4.5 shows that we have revised up our UK forecast since November from 2018-19 onwards. Like landfill tax, the profile of receipts this year seems to have been distorted by HMRC accounting system changes. Otherwise there is very little change to the forecast.

Table 4.7: UK aggregates levy forecast

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	413	376	378	378	381	386	389
March forecast	413	371	383	380	384	388	391
<b>Change</b>		-5	5	2	2	2	2

## Scottish forecast

4.36 Table 4.4 showed that the Scottish share of UK aggregates tonnage is relatively high, but that it has been on a declining path. According to the most recent data currently available it was 14.5 per cent in 2014-15. We assume that the share remains constant at that level, meaning our Scottish forecast has barely changed from November.

Table 4.8: Scottish aggregates levy forecast

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	60	55	55	55	55	56	56
March forecast	60	54	56	55	56	56	57
<b>Change</b>	0	-1	1	0	0	0	0

## Welsh forecast

4.37 We also hold the Welsh share of aggregates levy constant throughout the forecast at the latest available level of 9.6 per cent. The Welsh forecast therefore follows that for the UK, meaning it too is very similar to our November forecast.

Table 4.9: Welsh aggregates levy forecast

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	39	36	36	36	36	37	37
March forecast	39	35	37	36	37	37	37
<b>Change</b>	0	0	1	0	0	0	0



## Air passenger duty

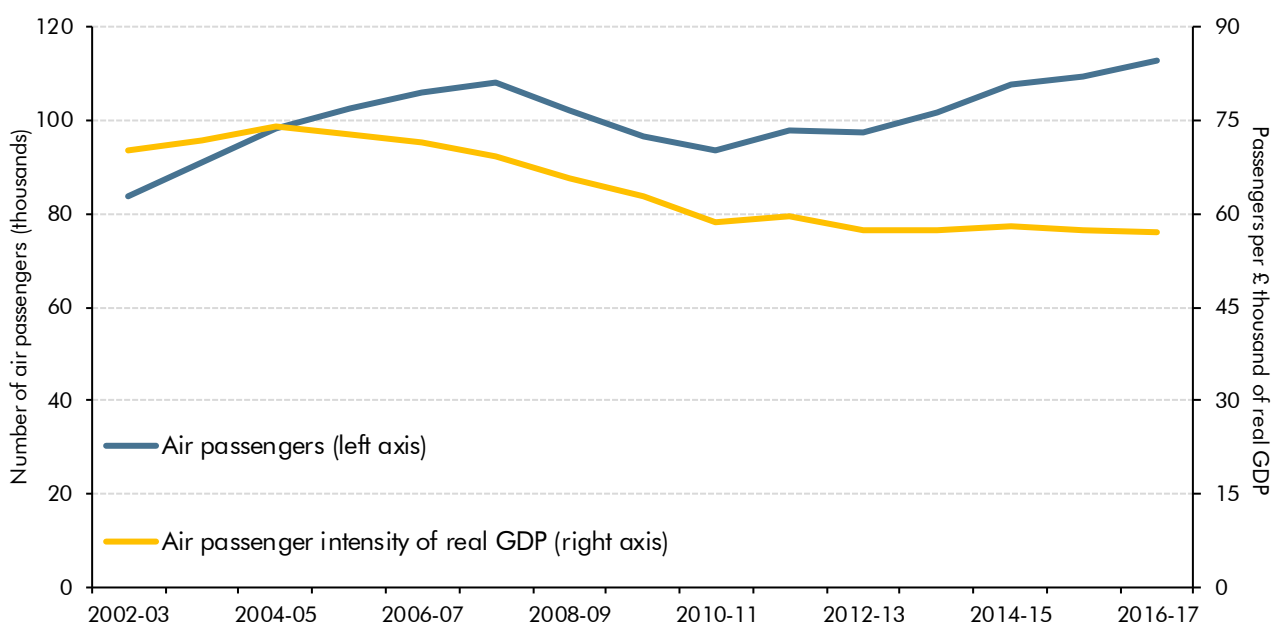
4.38 The Scotland Act 2016 includes provisions for the devolution of air passenger duty (APD) to Scotland. APD in Scotland was due to be replaced in April 2018 by Air Departure Tax (ADT) levied by the Scottish Parliament and collected by Revenue Scotland. At the time we closed our November forecast, the timing of this devolution was under review. The Treasury has confirmed that APD will not be ‘switched off’ in Scotland in April 2018 and that the timing of devolution remains uncertain. Our Scottish APD forecast is therefore illustrative.

### Trends in UK air passenger duty

4.39 APD is an excise duty that applies to all non-exempt passengers on flights leaving UK airports, with the level of tax determined by the final destination and class of travel. Destinations fall into two bands based on flight distance from London, with the highest duty rate applying to flights of more than 2,000 miles. As APD applies to the final destination, interconnecting flights are exempt. It was introduced in 1994 and has been through numerous policy changes, with the most recent significant change coming in April 2015 when the three long-haul bands were consolidated into one, reducing the total number of bands from four to two.

4.40 As Chart 4.5 shows, the number of air passengers departing UK airports fell sharply during the late 2000s recession and has steadily recovered since then, exceeding pre-recession levels in 2015-16. Our APD forecast assumes air travel is correlated with broader economic activity, so we expect the change in passenger numbers to be associated with GDP growth. Since the tax is paid on the number of passengers, the relationship is with real GDP and, as Chart 4.5 shows, this relationship has been fairly stable since 2010-11.

Chart 4.5: UK passenger numbers relative to economic activity



Source: HMRC, ONS, OBR

4.41 Table 4.8 shows that UK receipts have increased steadily since the recession, although they fell in 2015-16 following the change to the long-haul bands that reduced the effective duty rate. The table also shows the estimated proportion of APD attributable to Scotland using methodologies developed by HMRC and the Scottish Government. Neither methodologies have been revised since our November forecast.

- The **HMRC approach** uses unpublished data from the Civil Aviation Authority (CAA) on the number and destination of passengers departing from UK airports, adjusted to reflect CAA international air passenger route analysis and the ONS international passenger survey for flight bands and exemptions for interconnecting passengers. The Scottish share based on this approach has fluctuated – HMRC’s latest estimate shows an increase, from 8.4 per cent in 2011-12 to 9.6 per cent in 2016-17.<sup>2</sup>
- The **Scottish Government approach** is presented in its GERS publication. This uses published CAA data and different assumptions about the composition of flights by band and interconnecting passengers. The share on this basis was recently revised down substantially, although it still rises in recent years. In 2016-17, the Scottish Government estimate is 1.3 percentage points lower than the HMRC estimate.

Table 4.10: Air passenger duty receipts

	£ million							
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
<b>Total UK</b>	1,856	2,155	2,607	2,791	3,013	3,175	3,077	3,183
<i>of which, Scotland:</i>								
HMRC	169	184	219	235	257	285	274	306
GERS	153	168	197	213	225	243	247	264
	Per cent of total UK							
HMRC	9.1	8.5	8.4	8.4	8.5	9.0	8.9	9.6
GERS	8.2	7.8	7.6	7.6	7.5	7.6	8.0	8.3

### Scottish tax rates

4.42 As noted above, the timing of APD devolution to Scotland remains uncertain. When it is devolved, the Scottish Government has a stated policy intention to reduce the rates by 50 per cent and eventually to abolish the tax. But we do not yet have specific details or a timescale for how and when these cuts will be implemented. When such details become sufficiently clear we will reflect them in our forecast.

4.43 For now, our forecast illustrates the potential revenue to Scotland on the basis of maintaining APD rates in line with those set by the UK Government. If rates in Scotland were to differ from those in the rest of the UK, estimating the effect on receipts would not be straightforward as there might be significant behavioural effects that we would need to take into account as passengers chose to use different airports and flight routes.

<sup>2</sup> These latest HMRC estimates are lower in the most recent two years than those published in its ‘Disaggregation of tax receipts’ publication in October 2017. This reflects further analysis suggesting the Scottish share should be adjusted downwards to account for the exemption for child passengers.

## Methodology

- 4.44 Our forecast for UK APD is driven by the estimated number of passengers across the different bands, to which the appropriate tax rate is applied. The UK Government's stated indexation policy is to raise APD rates in line with RPI inflation each year. We adjust our forecast to allow for the upward trend in the share of passengers using low-cost operators.
- 4.45 We continue to use the mid-point between the HMRC and Scottish Government approaches to estimate the Scottish share of APD receipts to produce our central forecast. As in our November forecast we have averaged the past two years rather than using only the latest year given the volatility in the estimates. On this basis, the Scottish share of APD receipts used in the forecast is 8.7 per cent. We assume it remains constant across the forecast, though this assumption is also uncertain. For example, population growth in Scotland is projected to be slower than in the rest of the UK. This means that our forecast implies APD receipts per capita increasing faster in Scotland than the rest of the UK. It should be noted that not all passengers paying Scottish APD would be Scottish residents. This might be increasingly the case if Scottish airport capacity were less constrained than that in the rest of the UK. If we were to adjust the Scottish APD share for relative population growth as we do for some of our other forecasts, receipts in 2022-23 would be £4 million lower than our current forecast.
- 4.46 We add the Scottish element of any policy measures to produce the post-measures forecast.

## UK and Scotland forecasts

- 4.47 Table 4.9 sets out our APD forecast for the UK, which we have revised up since November. This reflects stronger in-year receipts, though the effect weakens in future years. Our methodology means the Scottish forecast moves in line with the UK forecast, so it has been revised up as well.

Table 4.11: UK air passenger duty forecast

	£ million						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	3236	3326	3499	3662	3784	3921	4067
March forecast	3236	3387	3520	3667	3795	3932	4073
<b>Change</b>	<b>0</b>	<b>61</b>	<b>22</b>	<b>5</b>	<b>12</b>	<b>11</b>	<b>6</b>

Table 4.12: Scottish air passenger duty forecasts

	£ million						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	282	290	305	317	327	339	352
March forecast	282	295	307	319	331	342	355
<b>Change</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

4.48 The SFC produced its first forecasts in December 2017 – like ours focused on APD paid in Scotland rather than the planned ADT. The main reason for the difference between our forecasts in 2016-17 is that the SFC use the GERS historical estimate, whereas we use an average of the HMRC and GERS figures. The SFC used Scottish-specific in-year information for 2017-18, which we have not done. But we have used more recent information at the UK level on stronger-than-expected receipts in 2017-18. These different approaches have brought our forecasts close together in 2017-18 and they remain so throughout. Our forecasts may of course diverge more in future, since they will be produced at different times of the year – with potentially different data and policies being included – and we may come to different forecast judgements even when presented with the same data and policies.

Table 4.13: Comparison to SFC forecast

	£ million						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December 2017	264	292	306	314	324	336	348
OBR March 2018	282	295	307	319	331	342	355
<b>Difference</b>	<b>17</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>

# 5 Social security spending

## Devolution of social security expenditure

- 5.1 The Scotland Act 2016 makes provision for several social security benefits to be devolved to the Scottish Parliament. Most are benefits for people who are disabled or in ill-health, or for those people who care for them.<sup>1</sup> The Scottish Parliament also has powers to create new benefits, top-up reserved benefits and change some aspects of universal credit. The precise timetable for social security devolution is yet to be agreed between the UK and Scottish Governments.
- 5.2 Social security is already separately administered in Northern Ireland, so we focus here on social security spending that is administered by the Department for Work and Pensions (DWP) in Great Britain and that is subject to the forthcoming devolution. Currently the only benefit that the Treasury has asked us to explicitly forecast for Scotland is carer's allowance.

## Carer's allowance

### Background

- 5.3 Carer's allowance was introduced in 1976. It supports individuals providing full-time care for others. The rate for 2018-19 will be £64.60 a week, with the rate for future years uprated in line with CPI inflation. Eligibility is contingent on both the carer and the recipient of care meeting a number of conditions. The recipient of care must already receive the relevant qualifying benefit.<sup>2</sup> The carer must provide care for at least 35 hours a week and earn less than £120 a week after deductions. Carer's allowance is also subject to various overlapping benefit rules. For example, claimants are not able to receive the state pension and carer's allowance at the same time.

### Scottish carer's allowance

- 5.4 The Scottish Government will introduce a supplement for those who claim carer's allowance in Scotland, which will ensure they receive the same level of benefits as those claiming jobseeker's allowance. This is to be introduced from 2018-19 and will be worth less than £10 a week over the forecast period. While the supplement seeks to support the same people, it is in effect a new benefit rather than an increase in carer's allowance and will be

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<sup>1</sup> The fiscal framework set out the following benefits: attendance allowance, carer's allowance, disability living allowance, personal independence payment, industrial injuries disablement allowance, severe disablement allowance, cold weather payment, funeral payment, sure start maternity grant, winter fuel payment and discretionary housing payments. The Scotland Act 2016 also provides for other areas to be devolved to the Scottish Parliament including payments made under the Scottish welfare fund, the healthy start vouchers scheme and employability programmes.

<sup>2</sup> Disability living allowance, personal independence payment, attendance allowance, constant attendance allowance (subject to certain criteria) or armed forces independence payment.

subject to different operational procedures and accounting treatment.<sup>3</sup> The increased generosity could increase take-up among those currently eligible but not claiming. The Scottish Government also intends to take over the administration of carer's allowance from DWP, with a stated aspiration to increase take-up. At this stage, we have insufficient information on either change to quantify the effects of the supplement on spending.

## Trends in carer's allowance expenditure

5.5 Table 5.1 sets out the in-payment caseload of carer's allowance in Great Britain and in Scotland in recent years (i.e. the caseload excluding those who are eligible but do not receive a payment due to the overlapping benefit rules). The caseload in Scotland has been relatively stable at 8.7 to 8.8 per cent of the Great Britain total since 2012-13. This is slightly higher than Scotland's 8.5 per cent share of the Great Britain population.

Table 5.1: Carer's allowance in-payment caseload in Great Britain and Scotland

	Carer's allowance in-payment caseload (thousands)							
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Great Britain	521	553	584	618	653	698	760	798
Scotland	47	50	52	54	57	61	66	70
Per cent of Great Britain total								
Scotland	9.1	9.0	8.9	8.8	8.7	8.7	8.7	8.8

5.6 Table 5.2 shows DWP's estimates of carer's allowance expenditure, which similarly shows the Scottish share being relatively stable at 8.7 to 8.8 per cent in recent years. In November we produced an illustrative projection for carer's allowance spending in Scotland by applying a constant share of 8.75 per cent to our Great Britain forecast.

Table 5.2: Carer's allowance expenditure in Great Britain and Scotland

	Carer's allowance expenditure (£ millions)							
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Great Britain	1495	1572	1733	1927	2088	2319	2545	2667
Scotland	135	141	153	169	182	203	222	234
Per cent of Great Britain total								
Scotland	9.1	8.9	8.8	8.8	8.7	8.7	8.7	8.8

## Great Britain forecast

5.7 Since eligibility for carer's allowance is related to receipt of other benefits, our forecasts are sensitive to changes in those related forecasts. Our carer's allowance forecast has been affected by the upward revisions to our disability benefits forecasts in recent years. And since carer's allowance cannot be claimed alongside the state pension, spending is also sensitive to changes in the age structure of the eligible population. This has shifted toward people of

<sup>3</sup> The Scottish Government have stated that the carer's allowance supplement will be paid as two lump sum payments though the Scottish Government have not set out the specific payment or eligibility dates. The funding of the supplement will be met from the Scottish Government's existing block grant and therefore would be currently be classified within the Departmental Expenditure Limits (DEL) unlike carer's allowance which is classified within DWP's Annually Managed Expenditure (AME).

working age in recent years, placing further pressure on spending. This was discussed in more detail in our October 2016 *Welfare trends report*.

- 5.8 Outturns were slightly lower than expected in November and December 2017, which has led us to revised down spending in 2017-18 relative to our November forecast. But we have also revised up our forecasts for qualifying benefits, which has led us to revise up carer's allowance spending from 2018-19 onwards. This is set out in Table 5.3.

Table 5.3: Great Britain carer's allowance spending forecast (excluding Scottish Government supplement)

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	2898	3167	3377	3553	3733	3932
March forecast	2872	3228	3457	3627	3807	4006
<b>Change</b>	<b>-26</b>	<b>61</b>	<b>79</b>	<b>74</b>	<b>74</b>	<b>74</b>

### Scottish forecast

- 5.9 We have refined our methodology for producing the Scottish share of spending on carer's allowance by allowing for slower growth in Scotland's working-age population relative to Great Britain as a whole, based on the latest Office for National Statistics principal population projection. This is similar to the approach we take for our Scottish income and landfill tax forecasts. It results in the Scottish share decreasing slightly over the forecast period, with a modest effect on spending. Changes in our forecast of carer's allowance expenditure in Scotland since November are set out in Table 5.4

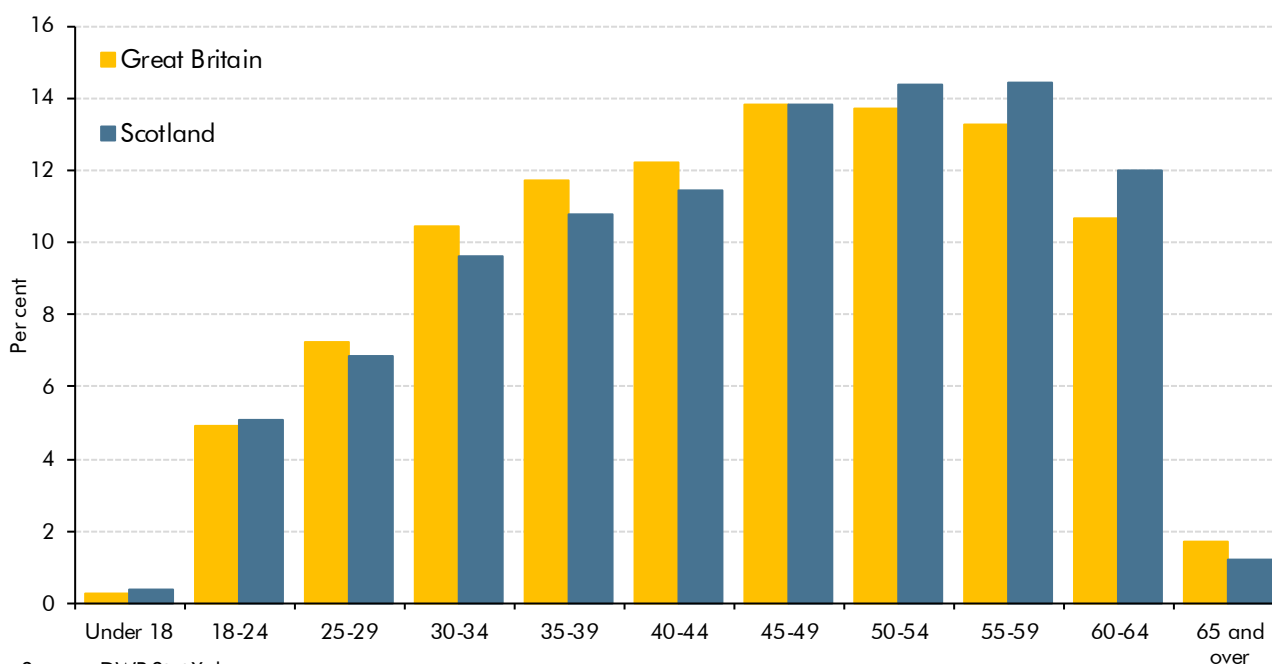
Table 5.4: Scottish carer's allowance spending (excluding Scottish Government supplement)

	£ million					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
November forecast	254	277	295	311	327	344
March forecast	251	282	301	316	331	347
<b>Change</b>	<b>-2</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>
<i>of which:</i>						
Great Britain forecast	-2	5	7	6	6	5
Population adjustment	0	0	-1	-1	-2	-3
<i>Memo: Percentage share of carers allowance expenditure in Scotland</i>	8.75	8.74	8.73	8.72	8.71	8.69

- 5.10 There are some further refinements that we plan to investigate, such as any Scotland-specific trends that affect the qualifying benefit caseloads or the propensity of eligible individuals to take up their entitlement. One area we will analyse is the age distribution of current and potential claimants. Chart 5.1 shows the age distribution of claimants in Scotland and in the whole of Great Britain. It suggests carer's allowance claimants in Scotland are on average older. Those aged between 50 and 64 make up 41 per cent of the Scottish caseload, versus 38 per cent in Great Britain as a whole. All else equal, this would suggest that a higher proportion of the existing caseload would reach the state pension age

(SPA) within a given number of years and become subject to the overlapping benefits rules. It could present a downside risk to our Scottish forecast. Though scheduled increases in SPA may on the other hand have a larger impact in Scotland. Finally, this is not a closed group of people, so the fact that more will reach SPA in the near future is negated by those ageing into the group, and potentially new claims among this group. So before drawing any conclusions from this picture we would need to understand more fully why the Scottish caseload has a higher average age.

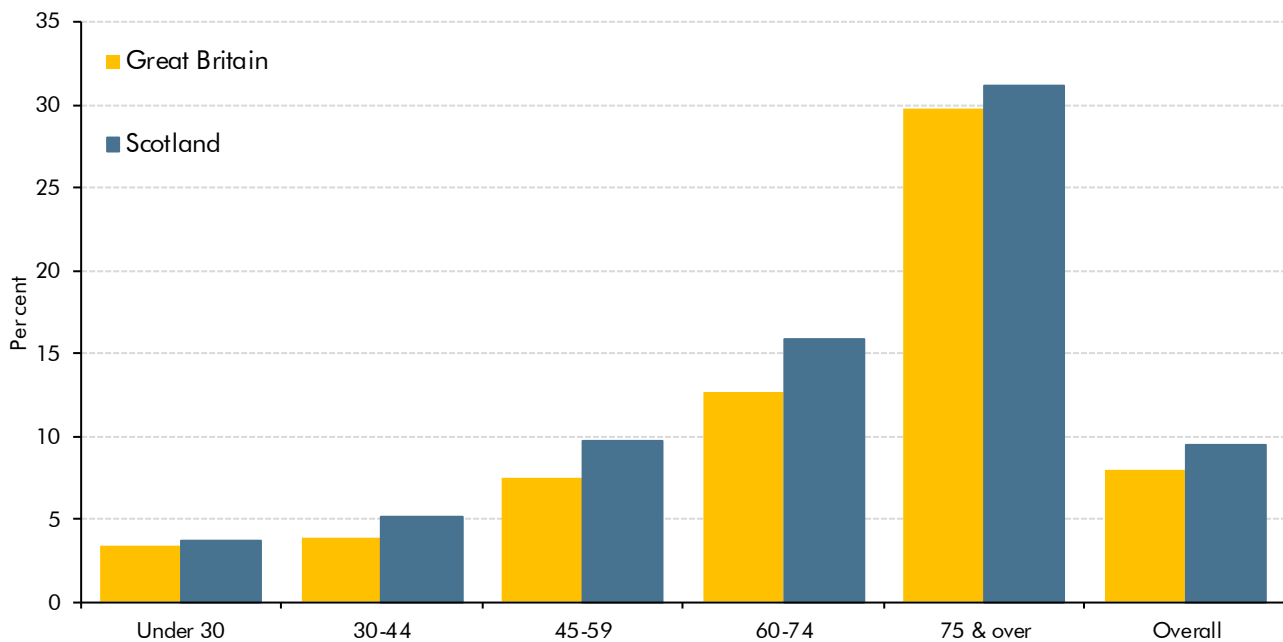
Chart 5.1: Age distribution of carer’s allowance claimants (February 2017)



5.11 Chart 5.2 provides another insight into the drivers of the respective carer’s allowance caseloads. It shows the proportion of each age group in Scotland and Great Britain that receive one of the main qualifying benefits: attendance allowance, disability living allowance or personal independence payment. This is only a partial picture of eligibility as it does not include all qualifying benefits and there are some conditions within these benefits. But broadly it shows a larger percentage of the population claimed a qualifying benefit in Scotland than in the rest of Great Britain in each age category. The likelihood of being in receipt of a qualifying benefit increases with age for both, but Scotland’s population is projected to age faster than the rest of Great Britain. For example, over the next five years the 60 to 74 age group is projected to increase by 7.6 per cent compared to 5.9 per cent in Great Britain. All else equal, this would represent an upside risk to our Scottish carer’s allowance forecast, as a relatively larger share of the population that requires care, and meets the qualifying criteria, may also be associated with a relatively larger number of working-age carers.



Chart 5.2: Percentage of population claiming a qualifying benefit (February 2017)



Source: DWP StatXplore

5.12 Table 5.5 compares our forecast with that published by the Scottish Fiscal Commission (SFC) in December 2017. The SFC forecast uses a different methodology and produces a lower forecast for spending in each year.<sup>4</sup> The SFC forecast does not reflect the higher qualifying benefits caseloads forecast that has increased our latest forecast, although that would only explain part of the difference between our forecasts. We will work with the SFC to explore the reasons for these differences and whether there is relevant information that we can bring to bear when producing our next Scottish carer's allowance forecasts.

Table 5.5: Comparison between OBR and SFC forecasts

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
SFC December forecast	247	265	282	297	309	321
OBR March forecast	251	282	301	316	331	347
<b>Difference</b>	<b>4</b>	<b>17</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>26</b>

<sup>4</sup> The SFC used a more complex age-specific ARIMA-based model.

