Office for
Budget
Responsibility

Devolved taxes forecast

November 2016

1 Introduction

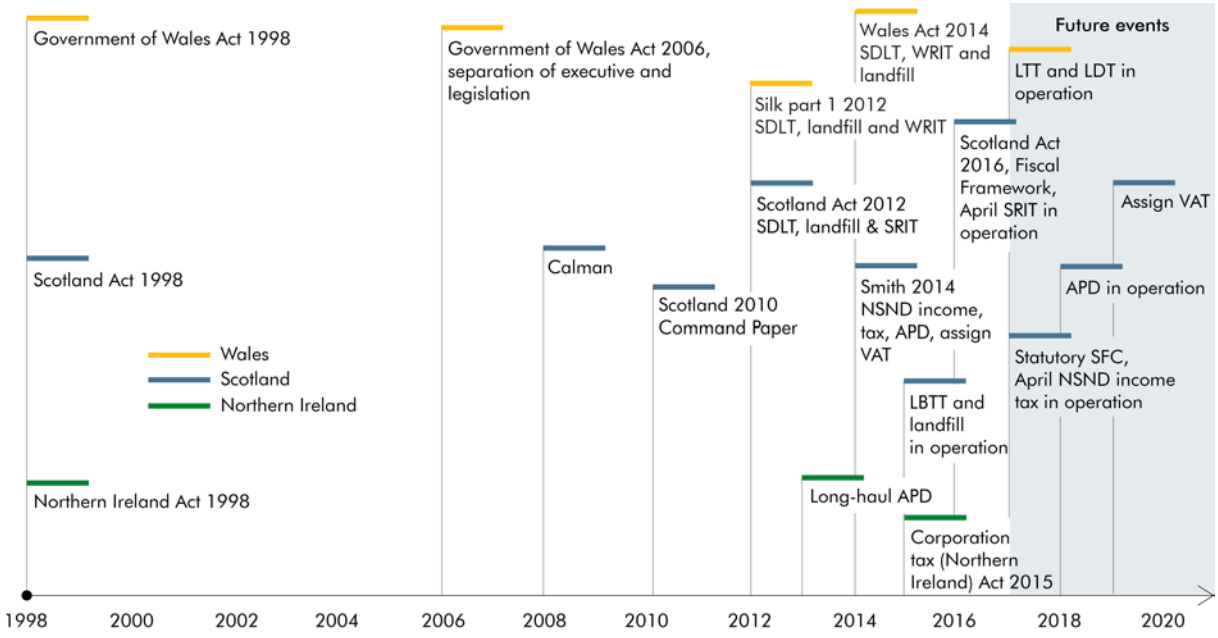
1.1 The Office for Budget Responsibility (OBR) was established in 2010 to provide independent and authoritative analysis of the UK's public finances. Alongside the UK Government's Budgets and Autumn Statements, we produce forecasts for the economy and the public finances. We publish these in our *Economic 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 expected to be devolved to the National Assembly for Wales. Our forecasts for devolved taxes are published alongside each *EFO* and are consistent with our main UK forecasts.

Devolution of fiscal powers to the Scottish Parliament and Welsh and Northern Irish Assemblies

1.3 The process of fiscal devolution to Scotland, Wales and Northern Ireland began in 1998 with the passing of a Scotland Act, a Government of Wales Act and a Northern Ireland Act. These set up the Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly. Figure 1.1 shows the timeline of some of the key devolution milestones since then, including some significant recent and forthcoming changes.

Figure 1.1: Fiscal devolution timeline



Scotland

The Scotland Act 2012

1.4 The Scotland Act 2012 gave new powers to the Scottish Parliament relating to taxation and borrowing. The Command Paper: *Strengthening Scotland's Future*[1] – published alongside the Scotland Bill in 2010 – set out our role in providing forecasts of Scottish income tax, landfill tax, stamp duty land tax and aggregates levy receipts.

1.5 In April 2015, stamp duty land tax (SDLT) and landfill tax were fully devolved to the Scottish Parliament, which replaced them with the land and buildings transaction tax (LBTT) and the Scottish landfill tax (SLfT). April 2016 saw the introduction of the Scottish rate of income tax (SRIT), which replaced a 10p reduction from each rate of UK income tax with rates set by the Scottish Parliament, currently at the same rate as the UK. The Government has legislated to devolve the aggregates levy to Scotland, to come into effect once the legal challenges affecting the levy are resolved.

The Scotland Act 2016

1.6 The Scotland Act 2016 implemented the recommendations of the 2014 Smith Commission. These included the devolution of:

- more flexible powers over **income tax** than those in the 2012 Act, to begin in April 2017;
- **air passenger duty** in April 2018;
- the assignment of a share of UK **VAT** receipts to begin in 2019-20;
- **aggregates levy**, although the timing remains uncertain and subject to the conclusion of ongoing legal challenges; and
- some **social security benefits**.

1.7 The Act gave the Scottish Government increased borrowing powers. It also set out the OBR's right to public finance information from the Scottish public authorities in order to carry out our statutory duties.

Scottish Government fiscal framework

1.8 In February 2016 the Scottish and UK Governments agreed the Scottish Government fiscal framework. This establishes a mechanism for adjusting the Scottish Government's block grant to reflect the devolution of revenue raising tax powers. The Scottish Government's block grant will continue to be determined via the 'Barnett' formula, but then adjusted

[1] *Strengthening Scotland's Future*, November 2010, Cm 7973.

downwards as set out in the fiscal framework. The OBR has no direct involvement in block grant decisions or adjustments, so we do not discuss any such changes in this document.

Scottish Fiscal Commission

1.9 The Scottish Parliament's Scottish Fiscal Commission Act 2016 established the Scottish Fiscal Commission (SFC). From April 2017 the SFC will have a statutory remit to prepare independent forecasts for devolved tax revenue as well as wider economic determinants. In the future this will extend to forecasts of devolved welfare spending. The SFC was initially established in June 2014 to scrutinise the Scottish Government's forecasts of LBTT, Scottish landfill tax and non-domestic rates collected by Scottish local authorities.

1.10 The fiscal framework specifies that "*a reciprocal statutory duty of cooperation between the Scottish Fiscal Commission and the OBR*" is required. We are working with the SFC to develop a memorandum of understanding that will set out our working arrangements and facilitate future cooperation. In the meantime we continue to work with the SFC as well as the Scottish Government to ensure that we can bring all relevant information to bear in producing our Scottish tax forecasts.

Wales

The Wales Act 2014

1.11 The Wales Act 2014 gave new powers to the Welsh Assembly relating to taxation and borrowing. It provides for the full devolution of SDLT and landfill tax from April 2018. It also stated that the Welsh Assembly will be able to set new Welsh rates of income tax (WRIT), which would operate in a similar way to SRIT. In November 2015, the then Chancellor announced that devolution of WRIT would no longer be subject to a referendum, as had originally been specified in the Act. The necessary amendments to make this change are included in the Wales Bill currently going through Parliament. The UK Government is also intending to devolve aggregates levy, again subject to the resolution of current state aid and legal challenges.

1.12 The Command Paper: *Wales Bill: Financial Empowerment and Accountability*[2] – published alongside the Wales Bill in 2014 – required us to begin to forecast Welsh taxes alongside Autumn Statement 2014 and twice a year thereafter. This currently includes forecasts for stamp duty land tax, landfill tax, aggregates levy and the Welsh rates of income tax. The Welsh Government's Budget will not be varied in line with fluctuations in tax receipts until the devolution of these taxes has been implemented.

Tax Collection and Management (Wales) Act 2016

1.13 The Tax Collection and Management (Wales) Act 2016 created a new Welsh Revenue Authority, which will oversee the collection of devolved taxes in Wales. The Welsh

[2] *Wales Bill: Financial Empowerment and Accountability*, March 2014, Cm 8838.

Government also announced its intention to replace SDLT with a 'land transaction tax' and landfill tax with a 'land disposals tax'. Specific details of these taxes, such as their rates and thresholds, have not yet been announced. Our forecasts will reflect any Welsh replacement taxes when details of any changes become sufficiently clear. We are also working with the Welsh Government to ensure that we can bring all relevant information to bear in producing our Welsh tax forecasts.

Northern Ireland

1.14 In November 2015, the Northern Ireland Executive (NIE) and the UK Government reached agreement over the implementation of the Stormont House Agreement of December 2014, including the devolution of corporation tax (CT) rates to the Northern Ireland Assembly from April 2018. The Corporation Tax (Northern Ireland) Act 2015 was given Royal Assent in March 2015. The Northern Ireland Executive has announced its intention to set a 12.5 per cent rate, to match that in the Republic of Ireland. While legislation has been passed, the final devolution is subject to agreement between the UK Government and the NIE, which has not yet been reached.

1.15 We plan to work with analysts in HMRC and the NIE to incorporate an estimate of the effect of this policy change on UK-wide receipts once agreement has been reached between the NIE and the UK Government. The NIE estimates that £768 million of UK corporation tax receipts in 2013-14 can be attributed to Northern Ireland, which is higher than HMRC's estimate of £485 million for the same year. HMRC estimates that figure increased to £569 million for 2015-16.[3]

1.16 The UK CT rate is due to be 19 per cent in April 2018, 6.5 percentage points higher than the proposed rate in Northern Ireland. There are likely to be some important behavioural effects that would need to be taken into account in order to estimate how much our UK-wide receipts forecast would be affected by this change. But the pre-behavioural effect on CT receipts would simply reflect the difference in the rates, so around a third of what Northern Ireland CT receipts would have been in the absence of a rate cut.

1.17 As well as this forthcoming devolution, air passenger duty on long-haul flights was devolved from January 2013. It has been set to zero by the NIE.

Forecast methodology

1.18 We published a methodology note in March 2012 that described how we planned to forecast Scottish tax receipts.[4] It explained that it was not possible to replicate in full the methodology we use to produce our UK-wide forecasts. In particular, the macroeconomic

[3] The differences are likely to be explained by the use of alternative methodologies. The Northern Ireland Executive's estimates are based on the levels of economic activity reported in Office for National Statistics regional accounts data. The HMRC approach matches company tax records with location and employment data to establish the location of taxable profits. Details can be found in their respective publications: https://www.dfpni.gov.uk/publications/northern-ireland-net-fiscal-balance-report-2012-13-and-2013-14 and https://www.gov.uk/government/statistics/disaggregation-of-hmrc-tax-receipts.

[4] *Forecasting Scottish taxes*, March 2012.

data that we would need to produce a Scottish macroeconomic forecast and economic determinants were generally not available at a Scottish level or were only available with a long lag. That remains the case. We are therefore not able to produce a Scottish macroeconomic forecast to drive the Scotland tax forecasts. These challenges apply equally to forecasting Welsh taxes and would also to any future forecast of Northern Ireland taxes.

1.19 Given these challenges, the methodologies we use are generally based on estimating and projecting Scottish and Welsh shares of relevant UK tax streams. We typically assume that the shares will continue at recent average levels, unless available evidence suggests we should adjust those assumptions to ensure our forecasts are central. For example, if a newly announced policy can be expected to have a disproportionate impact on the Scottish or Welsh share of a particular tax, or there is evidence pointing to different trends in an underlying tax base.

1.20 The exceptions to this are our LBTT and Scottish landfill tax forecasts, for which we are able to take into account receipts outturns since April 2015.

1.21 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.

1.22 The OBR's role in forecasting started three years ahead of the initial devolution of these taxes in Scotland. This has allowed us to develop and improve forecasts in light of experience and the availability of new information sources. We still consider these methodologies to be work-in-progress and will continue to look for further improvements. We hope that the establishment of the Scottish Fiscal Commission and the expansion of its forecasting remit will help to further that process more rapidly.

Forecast process

1.23 The process for producing the devolved tax forecasts has been as follows:

- **HMRC officials and OBR staff produced draft Scottish and Welsh tax forecasts** using our near-final pre-measures UK economy and fiscal forecasts. This took into account the latest available information on LBTT and landfill tax in Scotland. The BRC and OBR staff discussed these forecasts with officials from HMRC, the SFC and the Scottish and Welsh Governments on 2 November; and

- **in the final week before the Autumn Statement, HMRC officials and OBR staff provided a final set of Scottish and Welsh tax forecasts** using our final post-measures UK economy and fiscal forecasts, and taking into account Autumn Statement policy measures. Due to the confidentiality of the measures, we were unable to involve the Scottish and Welsh Governments in this stage of the process.

1.24 The Scottish Government produced its most recent 5-year forecast for receipts from LBTT and Scottish landfill tax in its Draft Budget in December 2015, following scrutiny from the

SFC. The forecasts we present in this document are our own. Differences between our forecasts and those of the Scottish Government are explained in Chapters 3 and 4.

Summary of forecasts

1.25 Tables 1.1 and 1.2 detail the forecasts for the Scottish and Welsh taxes.

Table 1.1: Summary of November 2016 Scottish tax forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax	4541	4590	11768	12220	12770	13432	14181
LBTT	416	483	539	596	657	726	796
Landfill tax	148	154	134	118	110	105	103
Aggregates levy	51	53	50	53	53	53	54
Air passenger duty	284	302	313	326	342	360	378
Total	**5440**	**5582**	**12804**	**13314**	**13931**	**14675**	**15511**

Table 1.2: Summary of November 2016 Welsh tax forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax	1928	1941	1981	2057	2151	2264	2391
SDLT	152	198	221	240	261	289	319
Landfill tax	34	35	30	27	25	24	23
Aggregates levy	34	35	33	35	35	35	35
Total	**2147**	**2208**	**2265**	**2359**	**2472**	**2612**	**2769**

Structure of the document

1.26 The rest of this document is structured as follows:

- **Chapter 2** presents our forecast of income tax on non-savings non-dividend income in Scotland and Wales;
- **Chapter 3** shows our forecast for LBTT in Scotland and the Welsh share of SDLT; and
- **Chapter 4** presents our forecast of Scottish landfill tax and the Welsh share of UK landfill tax, as well as the Scottish and Welsh shares of UK aggregates levy, and the Scottish share of UK air passenger duty.

2 Income tax

Scottish Government income tax

2.1 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 applies equally to Scottish taxpayers in all the main UK bands. The Scottish rate of income tax must be set every year by the Scottish Parliament. In its Draft Budget in December 2015 the Scottish Government announced that rates would remain aligned with the rest of the UK for 2016-17.

2.2 The Scottish rate of income tax is paid by Scottish taxpayers, who are defined as a UK taxpayer either resident in Scotland or whose closest connection is with Scotland. It is levied on non-savings, non-dividend (NSND) income liabilities (i.e. 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 (which is usually paid in the year after the activity that took place to create the tax liability).

2.3 The Scotland Act 2016 allows for wider ranging powers over income tax, including the power to vary the three – basic, higher and additional – rates and thresholds separately, as well as creating new bands. The Scottish Government would then retain the full NSND income tax liabilities from taxpayers in Scotland. Full devolution of these powers will commence in April 2017.

2.4 Until decisions are made by the UK and Scottish Parliaments that mean that income tax rates and/or thresholds will differ in specific periods, our forecast will continue to assume that the Scottish income tax rates and thresholds follow those set by the UK Government.

2.5 Such decisions could be forthcoming in respect of the higher rate threshold. The Scottish Government has published proposals that would involve the Scottish higher rate threshold being indexed in line with CPI inflation. That would differ from UK Government policy, which is to raise the higher rate threshold faster than inflation up to 2017-18. The UK Government also has an objective to raise the threshold to £50,000 by 2020-21, which would require faster above inflation rises. The Scottish Government has published analysis that compares its indexation proposals with the UK Government's £50,000 objective.[1] It estimated that Scottish income tax receipts would be £330 million higher in 2020-21 if the

[1] See *Scottish income tax from 2017/18*, Scottish Government, March 2016.

higher rate threshold was increased more slowly. Consistent with the remit set for us by the UK Government, we note this as a risk to this forecast and will factor any policy changes into future forecasts once they have been set out in a Draft Budget and approved by the Scottish Parliament.

Welsh rate of income tax

2.6 The Wales Act 2014 included a provision for a referendum to determine whether the Welsh Assembly will be able to introduce a Welsh rate of income tax (WRIT). It would also be levied on non-savings, non-dividend (NSND) income liabilities. In Autumn Statement 2015, the then Chancellor announced that a referendum would no longer be required to approve these arrangements. The necessary amendments to make this change are included in the Wales Bill currently going through Parliament. The income tax levied by the UK Government would be reduced by 10p in the pound for those individuals defined as Welsh taxpayers. The Welsh Assembly would then levy separate Welsh rates for each band of income tax. The new Welsh income tax rates would need to be set every year by the Welsh Assembly. The block grant from the UK Government to Wales would then be reduced to reflect the fiscal impact of the devolution of these tax-raising powers.

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.

Methodology

2.8 We generate a UK forecast for NSND income tax liabilities from the full UK income tax liabilities forecast published in our *Economic and fiscal outlook* (*EFO*). The key components of the UK forecast are:

- total **pay-as-you-earn (PAYE)** liabilities;
- **self-assessment (SA)** liabilities on NSND income. The UK forecast for SA in the *EFO* is on a receipts basis (i.e. when the cash is received). For this forecast it is adjusted to be on a liabilities basis (i.e. when the activity occurred) and to exclude the savings and dividend elements of SA; and
- **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. We then include deductions in respect of the Scottish and Welsh shares of Gift Aid repayments. Finally, we add estimates of the Scottish and Welsh income tax element of new policy measures announced in this Autumn Statement.

2.10 Information on the share of UK income tax in Scotland and Wales is derived from the Survey of Personal Incomes (SPI), an annual survey based on a sample of about 700,000 individuals in contact with HMRC during the course of the year through the PAYE, SA or

repayment claim systems. This is only available with a long lag, with data currently only available up to 2013-14.

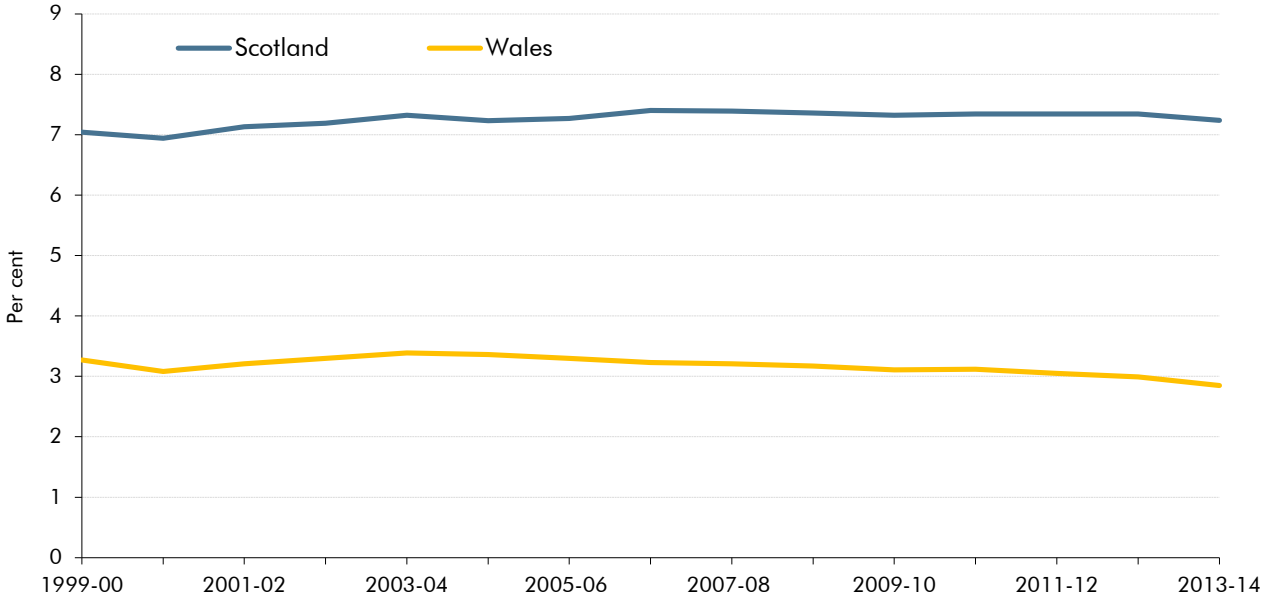
2.11 An individual's Scottish taxpayer status is determined by the location of their main place of residence for the majority of the tax year. If this is in Scotland, they are defined as a Scottish taxpayer. This leads to some uncertainty as some observations within the SPI are missing location data and in other cases the location can be hard to determine. It will be the responsibility of taxpayers to tell HMRC their correct address.

2.12 The Scottish and Welsh shares can be affected by a number of factors. These include:

- **different economic trends** between Scotland/Wales and the UK as a whole;
- **different movements in the income distribution** between Scotland/Wales and the UK; and
- **different effects of policy measures**.

2.13 Chart 2.1 shows the estimates of the Scottish and Welsh share from the SPI of total income tax, including savings and dividends. The Scottish share has been fairly stable at close to 7.3 per cent in most years, with a small drop in 2013-14. The Welsh share has been declining since peaking in 2003-04 at 3.4 per cent. It reached 2.8 per cent in 2013-14. In both cases the share is lower than the countries' share of the UK population: in 2014, 8.2 per cent of the UK's population lived in Scotland and 4.8 per cent in Wales.

Chart 2.1: Scottish and Welsh historic share of income tax receipts

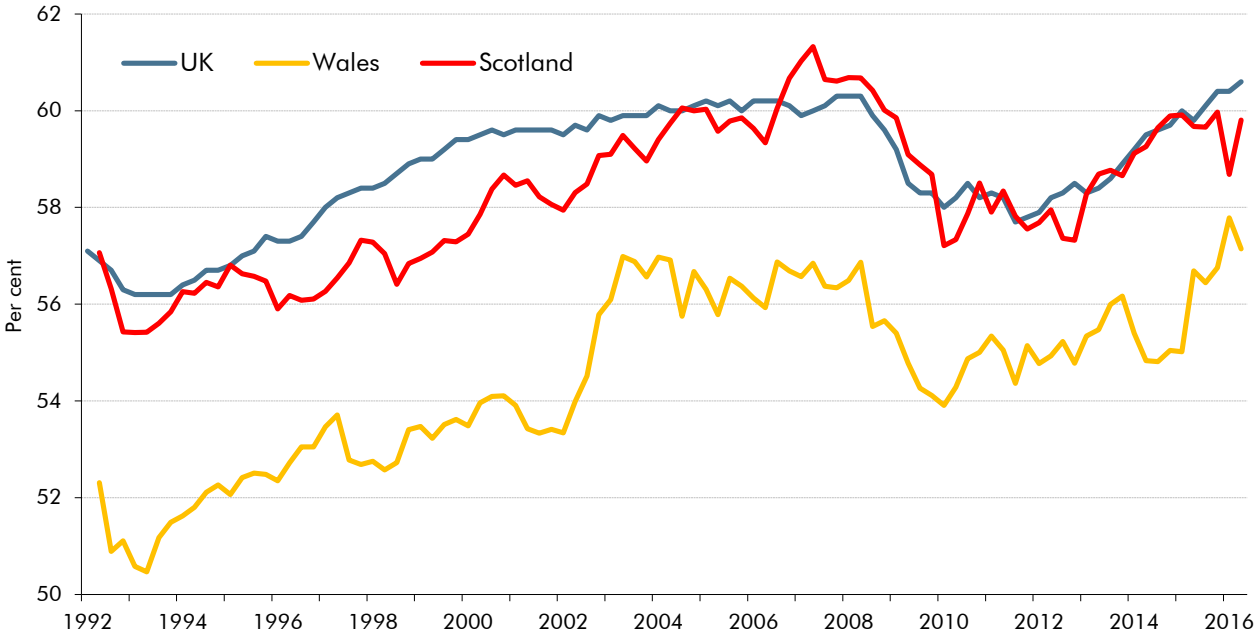


Note: Data unavailable for 2008-09 so the proportional shares are based on interpolation from the adjacent years.
Source: HMRC

2.14 These different shares of UK income tax can partly be explained by different labour market trends in Wales and Scotland relative to the rest of the UK. Charts 2.2 and 2.3 show that the

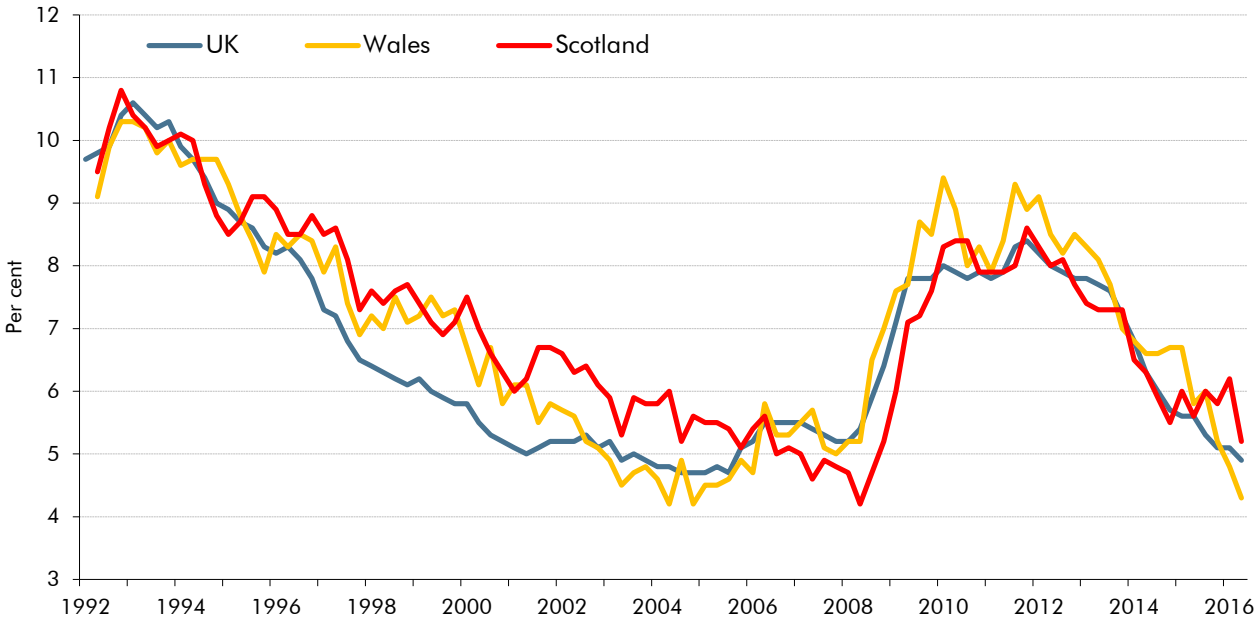
employment rate in Scotland has generally been similar to that in the UK as a whole, but it has typically been lower in Wales. Unemployment rates are similar, so the lower Welsh employment rate mainly reflects a higher inactivity rate.

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



Source: ONS

Chart 2.3: Unemployment rates in the UK, Scotland and Wales

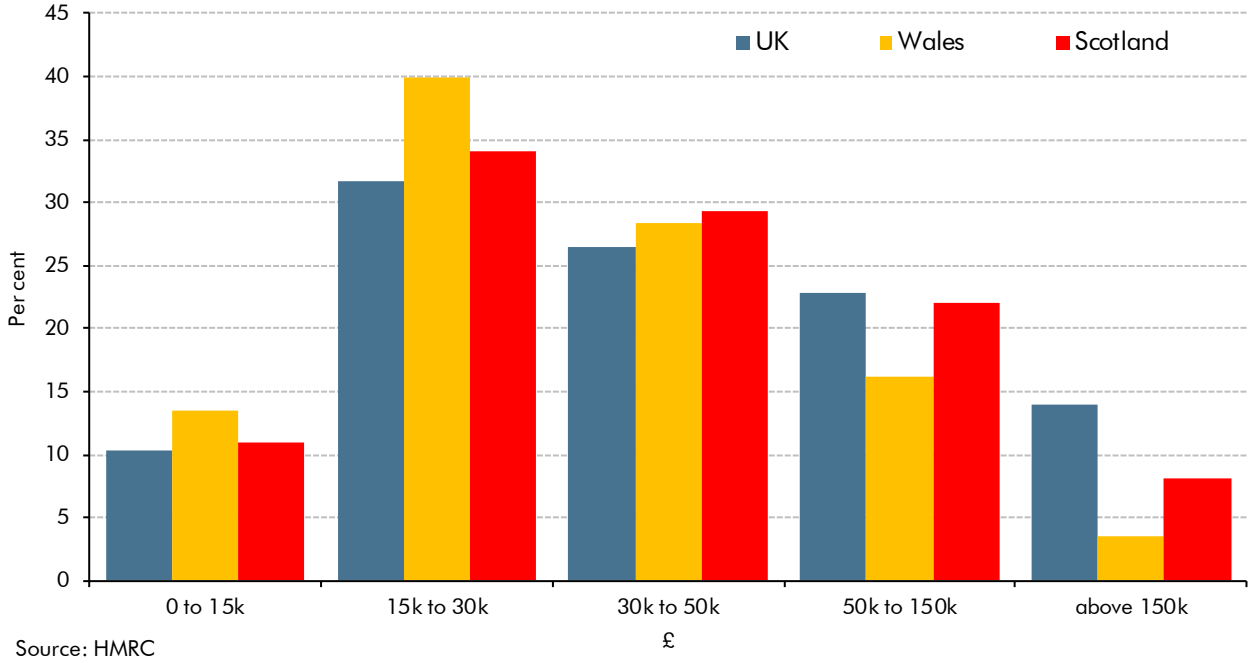


Source: ONS

2.15 Another factor for the relatively lower shares is the distribution of income. While the rates and thresholds of the income tax regime have varied over time, those on higher incomes have always been subject to higher marginal tax rates. Chart 2.4 shows the proportion of

total taxpayer income by income bands. Compared to the UK, the proportion of taxpayer income attributable to individuals with incomes below £30,000 is higher in Scotland, and particularly so in Wales. That pattern is reversed for incomes over £50,000 – and particularly for those over £150,000.

Chart 2.4: Proportion of total taxpayer income by income bands (2013-14)



Source: HMRC

2.16 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, freezes in the basic rate limit and higher rate thresholds and a number of anti-avoidance measures. In contrast, tax cuts, most notably the successive increases in the personal allowance, have had more of an effect at the lower end of the income distribution. We have adjusted the Scottish and Welsh shares used in our forecast to reflect the asymmetric effect of policies that have been implemented since the latest available SPI data.

2.17 The final step in our forecast process is to add the estimated Scottish and Welsh share of newly announced policy measures to generate the post-measures forecast.

UK forecast

2.18 Table 2.1 shows the UK forecast of tax liabilities on NSND income. Prior to including any policy measures our UK forecast is lower in each year of the forecast. By 2020-21, our forecast for UK tax liabilities on NSND income is £20 billion lower than we forecast in March. The key factors explaining the shortfall are:

- **revisions to 2015-16 and earlier years**. The PAYE income tax element of the UK forecast was revised down for 2015-16 in light of weaker-than-expected receipts at the

end of the financial year. This reflected lower tax from financial and non-financial sector bonuses. HMRC has also identified an error in the 2013-14 estimate of UK self-assessment liabilities on NSND income. Taken together, this lower starting point feeds through into a lower forecast in subsequent years;

- **weak in-year PAYE receipts**. PAYE receipts have been revised down sharply in 2016-17 (by £6.1 billion). This reflects the shortfall in 2015-16, weaker earnings growth and a lower than expected effective tax rate on employee salaries. This may reflect changes in the composition of the labour force or the income distribution. Growth in receipts from the financial sector – with many jobs at the higher end of the income distribution – has been weak so far in 2016-17. Over half of the gains in employee jobs in the last six months have been part-time where the effective tax rate paid is typically lower. The shortfall in 2016-17 is not explained by slower earnings growth is assumed to be structural and pushed through to future years;

- **lower productivity growth**. Earnings growth has been revised down, largely because of lower trend productivity growth. Uncertainty in the run-up to and in the transition phase after the UK's exit from the EU is likely to affect investment and the capital stock, with knock-on effects on trend productivity growth;

- **differential earnings**. We have assumed weaker growth at the top-end of the earnings distribution for four years from 2018-19 onwards, on the assumption that financial sector employment and earnings are likely to be disproportionately affected by the UK's exit from the EU;

- **incorporations**. An updated model of the pace at which people are moving from employment to incorporation has reduced NSND receipts by around £2.6 billion in 2020-21. That reflects the net effect of lower tax paid on employment income (relevant to our devolved income tax forecast) partly offset by higher corporation tax and dividends taxation. Box 4.1 in our *EFO* discusses this issue in more detail; and

- **recosting of past measures**. Following the UK Government's decision to abandon plans to create a market for secondary annuities, we have taken out the associated yield of just under £0.5 billion in 2017-18 and 2018-19 from PAYE receipts. SA liabilities on NSND income have also been revised down. We have lowered the yield expected from earlier policy measures and have assumed that the accelerated payments measures yields £0.7 billion less in 2015-16 than expected in March.

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

	£ billion								
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016 (excluding March measures) (a)	148.6	154.7	162.9	169.8	180.5	189.8	197.7	208.2	
November 2016 (inc March measures)	**146.0**	**150.9**	**156.9**	**159.4**	**162.9**	**168.9**	**176.5**	**185.2**	**195.2**
November 2016 (excluding March measures)	146.0	150.9	156.9	159.8	165.8	171.9	179.1	188.7	199.0
Forecast difference (b - a)	-2.6	-3.8	-6.0	-10.0	-14.6	-17.9	-18.6	-19.5	
November 2016 post-measures forecast	**146.0**	**150.9**	**156.9**	**159.4**	**163.1**	**169.3**	**177.1**	**185.6**	**195.6**

2.19 A number of policy measures that affect NSND income tax receipts have been announced in this Autumn Statement the largest are:

- '**Salary Sacrifice: remove tax and NICs advantages**'. This changes the amount of taxable benefit for benefits-in-kind provided in exchange for salary sacrifice, with much of the revenue relating to changes to workplace parking and company cars;
- '**Money Purchase Annual Allowance: reduce to £4,000 per annum**'. Taxpayers are allowed to carry on contributing to a defined-contribution pension while also drawing down pension funds. The amount is being reduced from £10,000 to £4,000; and
- '**Disguised Remuneration: extend to self-employed and remove company deduction**'. This extends similar Budget 2016 measures targeting employees and contractors, whereby income is disguised in the form of unrepaid loans.

Scottish forecast

2.20 Table 2.2 shows our latest forecast of the Scottish share of income tax. Our March forecast was based on the devolution of the 10p SRIT. Following the passage of Scotland Act 2016, we have increased our share of Scottish income tax from 2017-18 onwards to reflect the additional revenue as set out in the Act. The table also presents our latest forecast on the same basis as was used in March and on the broader basis for the years up to 2016-17.

Table 2.2: Scottish share of income tax

	Per cent of UK total for non-savings, non-dividend liabilities								
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	2.99	2.98	2.96	2.94	2.94	2.94	2.94	2.94	
November 2016- SRIT	2.99	2.98	2.95	2.94	2.94	2.94	2.94	2.94	2.94
November 2016- full NSND	7.35	7.40	7.38	7.36	7.35	7.35	7.36	7.37	7.37
November 2016	**2.99**	**2.98**	**2.95**	**2.94**	**7.35**	**7.35**	**7.36**	**7.37**	**7.37**

2.21 Table 2.3 provides our forecast for Scottish income tax liabilities. These are the liabilities for SRIT in 2016-17 and the full devolution of NSND income from 2017-18 onwards. As set out in paragraph 2.4, we assume the same rates and thresholds apply as for the rest of the UK.

2.22 Policy costings less than £3 million are not reported by the Treasury when setting out the effect on borrowing of policy decisions. Their effect is reported as negligible. There are three measures in this Autumn Statement where the impact is greater than £3 million for Scottish income tax. In each case the estimated effect is based on the assumption that the impact on Scottish revenue is the same on a per capita basis as overall tax liabilities – i.e. the 7.3 per cent of the total UK revenue that is used in the forecast. All three are subject to relatively high levels of uncertainty:

- '**Salary Sacrifice: remove tax and NICs advantages**'. We have assigned this measure a 'high' level of uncertainty, with very limited data available on many of the benefits-in-kind within the scope of the measure. HMRC analysts were able to look at the company car specific element, which showed only a marginally lower propensity of use in Scotland versus the UK as a whole. The costing therefore assumes that the share of revenue raised in Scotland is proportional to the total revenue raised in Scotland. Just over a third of the overall yield to be from increased NICs;

- '**Money Purchase Annual Allowance: reduce to £4,000 per annum**'. This costing assumes that the effect of the measure in Scotland will be the same as the overall share of tax liabilities. The measure will mainly affect individuals near retirement age, the proportion of which is slightly higher in Scotland. It is also likely to be used by higher earners, the proportion of which is slightly lower in Scotland. Around a third of the overall yield from the measure is expected to be from increased NICs. We assigned this measure a 'medium-high' uncertainty ranking; and

- '**Disguised Remuneration: extend to self-employed and remove company deduction**'. This costing has a 'very high' level of uncertainty as a large proportion of the tax base was calculated based on assumptions from HMRC's operational intelligence rather than any firm data. In the absence of firm information the costing assumes that the propensity to use these schemes in Scotland is the same as in the rest of the UK. Around a quarter of the revenue from the full measure is raised through corporation tax, with the proportion from corporation tax increasing in later years.

2.23 A number of other measures have smaller effects that individually amount to less than £3 million but together add small amounts to receipts. Most of this relates to a package of HMRC administrative and operational measures. Some of these costings were based on self-assessment returns reported under the 'disclosure of tax avoidance schemes' (DOTAS) framework. HMRC analysis of the postcodes on known tax avoiders within scope of these measures showed a lower propensity of use in Scotland, so the costing assumes a less than proportional effect for this measure. We consider this package to have a 'high' degree of uncertainty.

Table 2.3: Scottish income tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Pre-measures forecast	4541	4589	11756	12192	12731	13405	14155
Salary Sacrifice: remove tax and NICs advantages	0	neg	4	11	11	11	12
Money Purchase Annual Allowance: reduce to £4,000 per annum	0	0	3	3	3	3	3
Disguised Remuneration: extend to self-employed and remove company deduction	0	0	neg	8	17	neg	neg
Net effect of other measures	0	neg	3	6	8	10	8
Total new measures	0	neg	12	28	39	26	26
Post-measures forecast	**4541**	**4590**	**11768**	**12220**	**12770**	**13432**	**14181**

2.24 Table 2.4 and Table 2.5 provides a breakdown of our underlying forecast changes in the Scottish income tax forecast since March. To aid comparison, we have set out the tables on the basis of a pre-measures SRIT (Table 2.4) and then with the full NSND (Table 2.5). The change from SRIT to full NSND share adds around £7 billion a year. Other changes to the forecast include:

- the **lower UK forecast** is the biggest factor, reducing receipts in all years for the reasons described above. The increases to full NSND share means that the deterioration in the UK forecast has a larger absolute effect on the Scottish forecast;
- **recosting of previous measures**, including the decision to abandon plans to create a market for secondary annuities and weaker accelerated payments, reduces expected revenues;
- a new estimate of the Scottish share of **gift aid** costs. Gift aid is expected to cost £1.3 billion in 2016-17 at the UK level, increasing to £1.5 billion by 2021-22. HMRC has estimated that the Scottish share of gift aid cost is higher than its share of tax liabilities (at 8.3 per cent), closer to Scotland's share of the UK population; and
- remaining changes in the **Scottish share** are small.

Table 2.4: Changes in Scottish income tax since March (pre-measures SRIT basis)

	£ million							
	Outturn		Forecast					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March 2016 SRIT	4393	4539	4722	4902	5139	5399	5638	5920
November 2016 SRIT pre-measures	4314	4422	4541	4589	4696	4866	5076	5339
Change	**-79**	**-117**	**-181**	**-313**	**-443**	**-532**	**-563**	**-581**
of which:								
Scottish share (SRIT basis)	0	-6	-7	-2	-3	-6	-5	-3
Other (including gift aid estimates and previous measures)	0	1	4	-17	-10	-1	-10	-5
UK forecast	-79	-112	-179	-294	-430	-525	-547	-573

Table 2.5: Changes in Scottish income tax since March (full NSND basis)

	£ million							
	Outturn		Forecast					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
November 2016 pre-measures (SRIT basis)	4314	4422	4541	4589	4696	4866	5076	5339
November 2016 actual	4314	4422	4541	4590	11768	12220	12770	13432
Change	**0**	**0**	**0**	**0**	**7071**	**7354**	**7694**	**8092**
of which:								
Full NSND Scottish share	0	0	0	0	7060	7326	7655	8066
New measures	0	0	0	neg	12	28	39	26

Welsh forecast

2.25 Table 2.5 shows our forecast for the Welsh share of income tax. The 2013-14 SPI data published in February 2016 indicated a Welsh share of 1.28 per cent. We have revised it down very slightly in this forecast due to recosting previous policy measures.

Table 2.6: Welsh share of income tax

	Per cent of UK total for non-savings, non-dividend liabilities								
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	1.28	1.28	1.26	1.25	1.25	1.25	1.25	1.25	
November 2016	**1.28**	**1.27**	**1.26**	**1.25**	**1.24**	**1.24**	**1.25**	**1.25**	**1.25**

2.26 Table 2.6 provides a forecast for Welsh income tax liabilities on NSND income. These are the liabilities specifically for the Welsh rate. It assumes that a 10p rate is implemented by the Welsh Assembly. The disguised remuneration extension is the only measure in this Autumn Statement that has a non-negligible impact on the WRIT and then only in 2019-20. As with the estimate of the Scottish impact, we have assumed that the propensity to use such schemes is the same as in the rest of the UK.

Table 2.7: Welsh income tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Welsh income tax liabilities (pre-measures)	1928	1941	1979	2053	2144	2260	2387
Disguised Remuneration: extend to self-employed and remove company deduction		neg	neg	neg	3	neg	neg
Net effect of other measures		neg	neg	neg	3	4	4
Welsh income tax liabilities (post-measures)	**1928**	**1941**	**1981**	**2057**	**2151**	**2264**	**2391**

2.27 Table 2.7 provides a breakdown of the other changes in the Welsh income tax forecast since March. Changes in the Welsh share have been relatively small. The downward revision to our UK forecast is the main reason for the lower Welsh forecast. The Welsh share of gift aid costs has been estimated by HMRC to be slightly lower than the share of population at 4.1 per cent. Gift aid repayments are estimated to cost around £30 million a year

Table 2.8: Changes in Welsh income tax since March

	£ million							
			Forecast					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March 2016	1876	1937	2010	2081	2171	2279	2382	2505
November 2016	1843	1886	1928	1941	1981	2057	2151	2264
Change	-34	-51	-82	-140	-190	-222	-231	-241
of which:	0	0	0	0	0	0	0	0
Welsh share	0	-4	-8	-9	-5	-3	0	0
Other (including gift aid estimates and previous measures)	0	1	2	-7	-5	-1	-5	-2
New measures	0	0	0	neg	neg	5	7	5
UK forecast	-34	-48	-76	-124	-182	-223	-233	-244

3 Taxes on property transactions

Scottish land and buildings transaction tax

3.1 The Scotland Act 2012 provided for stamp duty land tax (SDLT) to be devolved to Scotland in April 2015, which included the power to change the tax system as well as tax rates. The system was changed through the Land and Buildings Transaction Tax (Scotland) Act 2013, which received Royal Assent on 31 July 2013.

3.2 In April 2015, the land and buildings transaction tax (LBTT) replaced UK-wide SDLT in Scotland. Prior to that there were also reforms to the UK SDLT tax system that took place in December 2014. The main changes that have affected the taxation of property transactions in Scotland are:

- on 4 December 2014, **the UK residential SDLT regime moved from a 'slab' to a 'slice' system**. As a result, between December 2014 and March 2015 property transactions in Scotland were taxed under the new UK SDLT regime, before moving to the LBTT regime in April 2015. The UK changes were discussed in our December 2014 *EFO*;
- a **requirement to pay LBTT prior to registration of the title**, intended to encourage prompt payment; and
- **modifications to reliefs and exemptions**, including the withdrawal of sub-sale relief arrangements.

Residential property

3.3 The Scottish Government announced LBTT rates and bands for 2016-17 in its December 2015 Draft Budget. For residential property the rates remained at:

- 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 From April 2016 the Scottish Government has also implemented a 3 per cent supplement for purchases of additional properties, such as buy-to-let and second homes. The 3 per cent

additional dwellings supplement applies to all transactions over £40,000. For example, a £100,000 purchase of a buy-to-let property would be subject to LBTT. It would be exempt if purchased as a primary residence. This measure is similar to that announced by the UK Government in Autumn Statement 2015 and also implemented in April 2016.

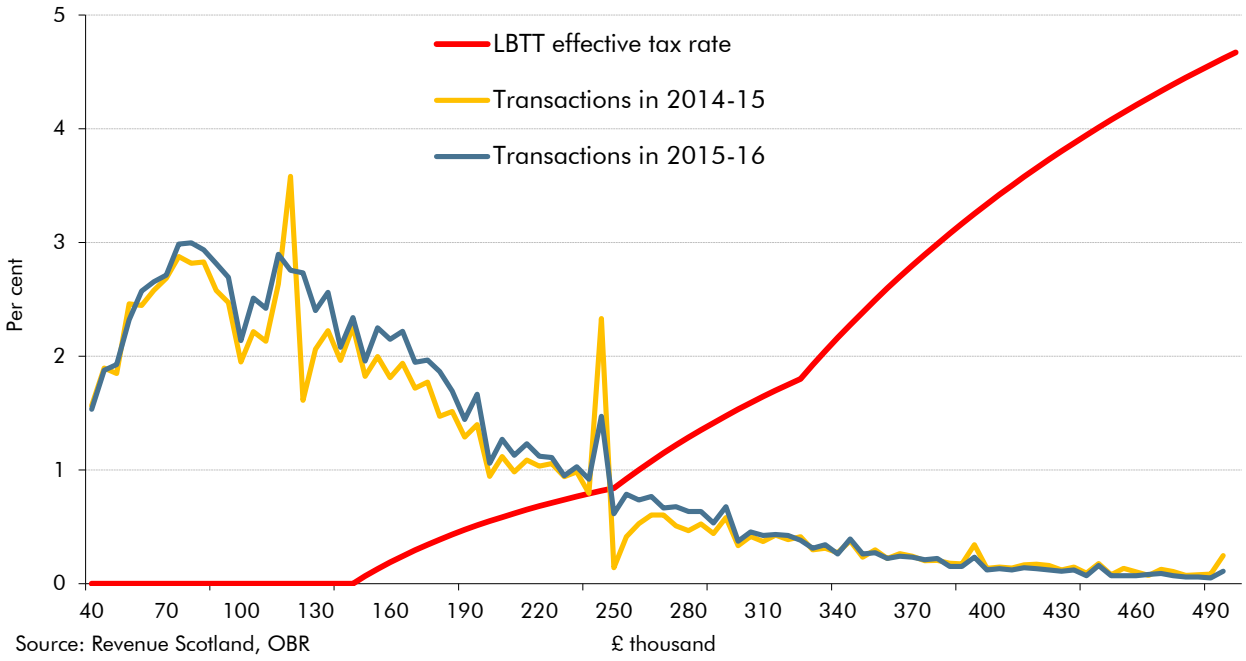
3.5 Chart 3.1 shows how the amount of tax paid on transactions at different property prices differs between the UK SDLT system and the Scottish LBTT system. It shows that there are substantial differences at some prices. For example, the purchaser of a £260,000 main residence – just above the 2 per cent threshold in both systems – would pay £400 less tax in Scotland. By contrast, the purchaser of a £1.5 million main residence would pay £45,000 more tax under the Scottish system. For additional properties, the differences are similar, but the amount of tax paid under both systems is higher due to the surcharge/supplement.

Chart 3.1: UK SDLT and Scottish LBTT tax schedules for residential property

Source: OBR

3.6 Chart 3.2 shows LBTT tax schedule for main residential property transactions up to £500,000 against the distribution of house prices in Scotland under the last year of SDLT in 2014-15 and under LBTT in 2015-16. From this it is clear that for the majority of properties in Scotland there would be a zero rate and that few properties in Scotland would be subject to the 10 and 12 per cent LBTT rates. The distribution of transactions is now smoother, with the previous distortions at the old SDLT 'slab' tax thresholds of £125,000 and £250,000 much reduced. This is consistent with the assumptions made in our December 2014 *EFO* about the UK SDLT reform, although some inertia and preference for negotiating prices at round numbers has meant the bumps in the distribution have not disappeared entirely.

Chart 3.2: Distribution of property transactions in Scotland and LBTT tax rate



Source: Revenue Scotland, OBR

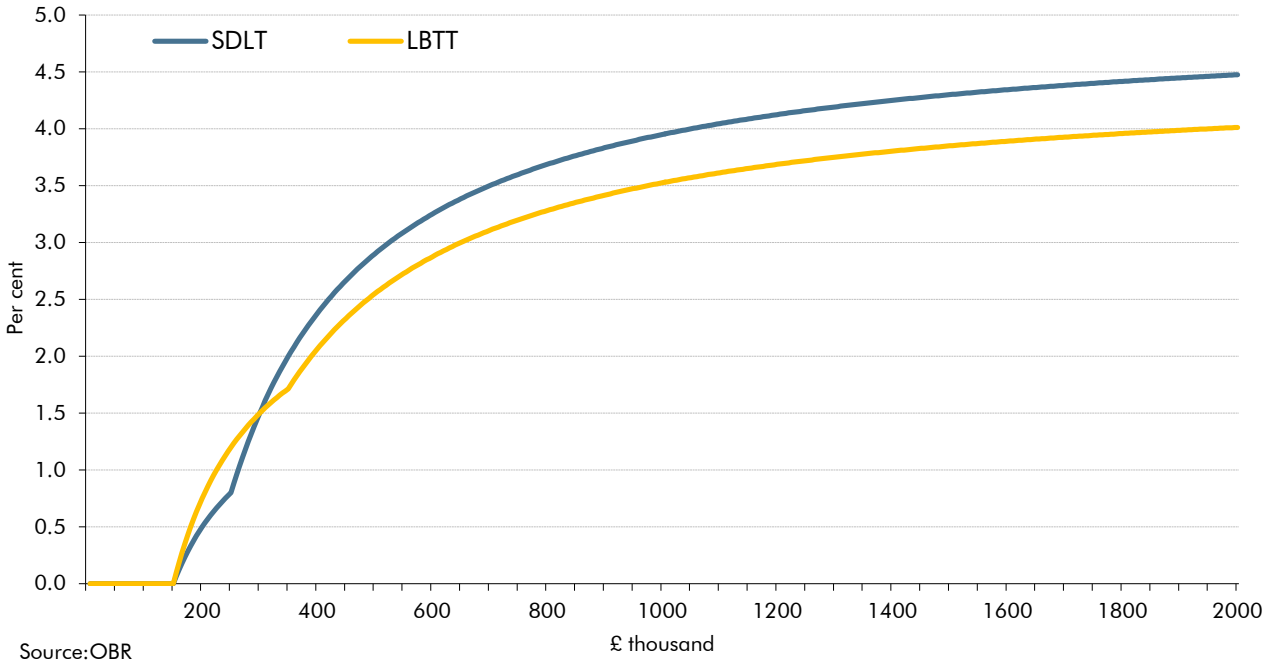
Commercial property

3.7 The 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.

3.8 In March 2016, the UK Government announced reforms to commercial SDLT, moving that from a 'slab' to a 'slice' system as well. The rates are not identical to those under LBTT. The 0 per cent band is the same, but it is followed by a 2 per cent rate that has an upper limit at £250,000, above which there is 5 per cent rate. Chart 3.3 shows the comparison with LBTT. A commercial property transaction at £275,000 would pay £500 more under LBTT than SDLT whereas a transaction at £480,000 would pay £1,650 more under SDLT.

Chart 3.3: UK SDLT and Scottish LBTT tax schedules for commercial property



Source:OBR

Welsh property transactions tax

3.9 The Welsh Government in its Tax Collection and Management (Wales) Act 2016, announced its intention to replace SDLT with a 'land transaction tax'. A further bill will detail the new tax rates and bands. Our forecasts will reflect the new tax when details of any changes become sufficiently clear.

Methodology

3.10 The forecast for residential LBTT and the share of Welsh residential SDLT uses the HMRC residential 'stamp duty plus model' (SDM+). This is a microsimulation model that allows us to apply the tax schedules for LBTT and SDLT to a full sample of transactions from a given year and then grow them in line with our price and transactions forecasts for the residential property markets. We moved to this model in March 2016, having previously relied on a representative 10 per cent sample. We assume that Scottish and Welsh prices and transactions grow in line with those for the UK as a whole from 2015-16 onwards.

3.11 The forecast for commercial LBTT and the Welsh share of commercial SDLT is modelled using HMRC's commercial stamp duty plus model, which works in a similar way to the residential SDM+. Again, we assume that Scottish and Welsh prices and transactions grow in line with those for the UK as a whole from 2016-17 onwards. The volatility of commercial property prices and transactions is considerably greater than in the residential market.

3.12 Our residential Welsh SDLT forecast uses base year data from 2015, while for commercial SDLT it is 2015-16. HMRC does not hold information on the distribution of LBTT payments, therefore the base year remains SDLT transactions in Scotland in 2013-14, with substantial

adjustments applied to account for the significant policy changes since then. Each base year will have a slightly different distribution of transactions and that may affect how each forecast responds to changes in economic determinants. Similarly, the LBTT forecast may respond differently to the forecast for SDLT. We will be working with HMRC, Revenue Scotland and the Scottish Fiscal Commission to ensure that future LBTT forecasts can be based on more recent data.

3.13 We add any additional effects from new policy measures to produce the post-measures forecast.

3.14 Table 3.1 shows how the Scottish and Welsh shares of UK property transaction tax receipts have evolved since 2007-08. All data points relate to SDLT except 2015-16 in Scotland, which relates to LBTT. UK-wide receipts fell sharply in 2008-09 and only returned to their pre-crisis levels in 2014-15. Scottish and Welsh residential SDLT receipts are still below their pre-crisis levels, and their share of total receipts has continued to fall for both residential and commercial transactions. The declining share is partly due to the strength of the property market in London and southern England in recent years. House prices and property transactions are still below their pre-crisis peak in both Scotland and Wales.

3.15 In 2015-16 receipts from residential transactions fell in Wales and Scotland, largely due to the policy reforms that reduced the tax paid on most transactions. Commercial property tax receipts in Scotland and Wales in 2015-16 remained slightly below their 2007-08 levels.

Table 3.1: Historical Scottish and Welsh shares of property transaction tax receipts

	£ million								
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
UK:	**9958**	**4796**	**4885**	**5960**	**6130**	**6907**	**9273**	**10738**	**11090**
of which									
Residential	6680	2950	3290	4040	4220	4905	6450	7500	**7510**
Commercial	3278	1846	1595	1920	1910	2002	2823	3238	3580
	Totals								
Scotland:	**565**	**320**	**250**	**330**	**275**	**283**	**390**	**475**	**410**
of which:									
Residential	340	185	135	165	155	170	215	270	200
Commercial	225	135	115	165	120	113	175	205	210
Wales:	**210**	**115**	**100**	**115**	**125**	**105**	**150**	**172**	150
of which:									
Residential	130	55	55	65	65	70	90	105	80
Commercial	80	60	45	50	60	35	60	70	70
	Per cent of UK total								
Scotland:									
Residential share	5.1	6.3	4.1	4.1	3.7	3.5	3.3	3.6	2.7
Commercial share	6.9	7.3	7.2	8.6	6.3	5.6	6.2	6.3	5.9
Wales:									
Residential share	1.9	1.9	1.7	1.6	1.5	1.4	1.4	1.4	1.1
Commercial share	2.4	3.3	2.8	2.6	3.1	1.7	2.1	2.2	2.0

UK SDLT forecast

3.16 Stamp duty land tax (SDLT) receipts are forecast to increase by 50 per cent over the forecast, from £11.1 billion in 2016-17 to £16.6 billion in 2021-22. This strong rise reflects both tax base effects – rising prices and, to a lesser extent, transactions – as well as a rising effective tax rate, as rising house prices drag a greater proportion of the value of residential transactions into higher tax brackets. It also reflects policy measures that have come into effect in 2016: the 3 per cent SDLT surcharge on additional properties and the reforms to the commercial property regime.

3.17 Compared with March, SDLT receipts in 2016-17 have been revised down by £1.6 billion. Residential transactions have been lower than forecast, partly due to the additional properties surcharge having a much greater forestalling effect than we expected. Property prices are a little weaker since our last forecast, although the introduction of a new ONS house price index means our current and previous forecasts are not directly comparable. The effective tax rate also appears to have fallen, reflecting the weaker top end of both the commercial and residential property markets. These negative effects are partly offset by the additional properties surcharge bringing in more receipts than expected. Pushing the weaker 2016-17 receipts through the forecast takes £1.7 billion off receipts by 2020-21 compared to our March forecast.

3.18 The package of HMRC administration and operational measures announced in this Autumn Statement raises a small amount of additional SDLT in our UK forecast, but SDLT makes up less than 10 per cent of the total yield expected from the package.

Scottish forecast

LBTT receipts outturn

3.19 Eighteen months of LBTT receipts data have now been published by Revenue Scotland. These are shown in Chart 3.4. In 2015-16, total receipts were £416 million, with £202 million from residential transactions and £214 million from commercial transactions. For the six months to September 2016 the trends in receipts have diverged. Residential receipts are up £52 million (58 per cent) on the same period last year, much of this being due to the additional dwellings supplement raising £42 million (net of paid refunds). Commercial receipts are 9 per cent down on the same period, with this weakness concentrated in the months after the EU referendum in late June. From July to September commercial LBTT receipts were down 31 per cent on the same period in 2015. We have adjusted our forecasts in light of these trends.

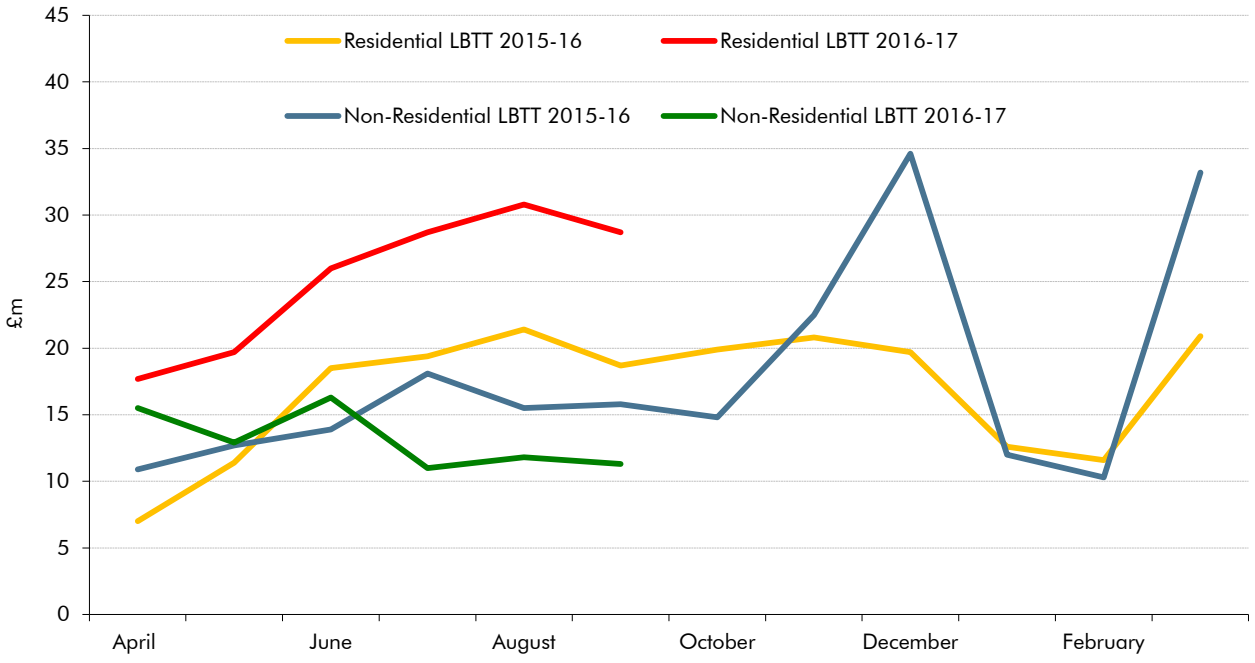
3.20 The residential profile in both 2015-16 and 2016-17 has been distorted by 'forestalling' effects. These occur when firms or individuals bring activity forward to avoid paying tax at a higher rate that is about to take effect.[1] A large number of high-value residential transactions were brought forward before the April 2015 introduction of LBTT. This boosted

[1] For more information see our *Working Paper No.10: Forestalling ahead of property tax changes* (2016).

SDLT receipts in March 2015 at the expense of LBTT receipts in the following months. The same pattern took place at the end of 2015-16, when buyers moved transactions forward to avoid the additional dwellings surcharge that took effect in April 2016.

3.21 The outturns suggest there may also have been some LBTT forestalling with commercial transactions, although the month-on-month growth is less pronounced. Commercial transactions tend to cluster at the end of the calendar year and financial year, with a similar pattern observed in Scotland and at the UK level.

Chart 3.4: Land and buildings transaction tax outturns



Source: Revenue Scotland

LBTT forecast

3.22 Table 3.2 shows our latest forecasts for residential and commercial LBTT. They reflect the latest residential and commercial LBTT receipts pattern in-year. Our residential LBTT forecast for 2016-17 is little changed from March. We still expect a large increase (45 per cent) between 2015-16 and 2016-17. We have revised down our residential LBTT forecast for the rest of the forecast period, by an average of 3 per cent a year.

3.23 We have made larger changes to our commercial LBTT forecast. We now expect receipts to fall by 12 per cent this year. For the rest of the forecast, receipts remain around 13 per cent lower than we forecast in March. This leaves overall LBTT down by an average of 6 per cent compared to March, but receipts still rise significantly across the forecast period. Residential LBTT receipts are forecast to increase by 75 per cent across the forecast period, while commercial LBTT receipts rise 24 per cent.

Table 3.2: Land and buildings transaction tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Total LBTT							
March 2016	401	509	581	644	707	767	
November 2016	416	483	539	596	657	726	796
Change	**15**	**-26**	**-42**	**-48**	**-50**	**-41**	
Residential LBTT							
March 2016	206	292	352	404	454	500	
November 2016	202	293	340	387	437	496	554
Change	**-4**	**1**	**-12**	**-17**	**-17**	**-4**	
Commercial LBTT							
March 2016	195	217	229	241	253	266	
November 2016	214	190	199	209	219	230	242
Change	**19**	**-27**	**-30**	**-31**	**-33**	**-36**	

3.24 Table 3.3 breaks down the sources of changes in our residential LBTT forecast since March. Recent LBTT outturns and changes in our house price and property transactions forecasts all reduce the forecast, but the biggest source of revision is an updated estimate of the effect of additional dwellings supplement. In March we used the Scottish Government's published estimate that the measure would increase revenue by £23 million in 2016-17. This estimate factored in a negative behavioural impact on the main owner-occupier market that would reduce LBTT receipts by £13 million, while the supplement itself was expected to yield £36 million. But it has already raised £42 million in the first six months of 2016-17, despite forestalling that will have reduced initial receipts.

3.25 Those affected by the supplement are entitled to reclaim the surcharge if the property was purchased to replace their main residence and they sell their previous main residence within 18 months, so the receipts to-date remain at risk of being refunded in future. The level and precise timing of refunds is highly uncertain – in the absence of full data, we assume that 25 per cent of all revenue will be refunded, which has been split into 18 per cent within a year of the transaction taking place and 7 per cent in the second year. This refund assumption is slightly higher than in our SDLT forecast as Scotland has relatively smaller private rental sector, so more transactions are at risk of claiming a refund. Even after allowing for refunds, we expect the supplement in 2016-17 to raise £64 million more than we assumed in March, over 2½ times higher than the original estimate. This increase is carried through the rest of the forecast. It is a slightly bigger upward revision to the one we have made in our SDLT forecast, where the equivalent surcharge also appears to be raising more than expected despite forestalling and expected refunds.

3.26 Compared to its SDLT equivalent we expect the LBTT supplement to account for a larger share of residential revenue. This is partly due to the higher proportion of transactions that would otherwise not be taxed in Scotland (see Chart 3.1). In 2015-16, around half of Scottish residential transactions were between £40,000 and £145,000 meaning they would only have paid LBTT if they were for an additional dwelling purchase. The price distribution

in the rest of the UK is higher while the starting threshold for SDLT is lower. So a lower 30 per cent of transactions would only pay SDLT if they were for an additional property.

Table 3.3: Changes in residential LBTT since March

	£ million					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	206	292	352	404	454	500
November forecast	202	293	340	387	437	496
Change	**-4**	**1**	**-12**	**-17**	**-17**	**-4**
of which:						
Receipts outturn	-4	-35	-39	-44	-49	-53
House prices		-6	-12	-19	-20	-15
Property transactions		-24	-17	-12	-8	-2
Recosting - additional dwellings supplement		64	54	57	60	66
Modelling		1	1	1	1	0

3.27 Table 3.4 shows the sources of changes in our commercial LBTT forecast since March. Despite higher-than-expected receipts in 2015-16, the main factor is the lower-than-expected receipts so far in 2016-17, which is pushed through the forecast. The net effect of downward revisions to commercial prices and an upward revision to transactions is small, reducing the forecast from 2017-18 onwards.

Table 3.4: Changes in commercial LBTT since March

	£ million					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	195	217	229	241	253	266
November forecast	214	190	199	209	219	230
Change	**19**	**-27**	**-30**	**-31**	**-33**	**-36**
of which:						
Receipts outturn	19	-34	-24	-25	-26	-28
Property market determinants		6	-7	-7	-8	-9
Modelling changes		1	1	1	1	1

3.28 The last forecast published by the Scottish Government was in December 2015, so does not reflect the latest outturns. In March our forecast for residential LBTT was around £25 million (8 per cent) lower than the Scottish Government's estimate for 2016-17. By 2020-21, it was nearly £100 million (17 per cent) lower than the Scottish Government's. Our forecast is lower than the Scottish Government's December 2015 forecast, as the upward revision to receipts from the additional dwellings supplement only partially offsets the downward revisions to the main LBTT forecast.

3.29 Our LBTT forecast models are different to those used by the Scottish Government. We use a microsimulation model (described above), whereas the Scottish Government uses a log-normal model. We have considered the use of a log-normal model for our residential UK SDLT forecast, but decided that a microsimulation model was better able to factor in effects associated with the high-end London property market.

3.30 Our commercial forecast was extremely close to the Scottish Government's in March. The big downward revision to this forecast because of weaker in-year receipts means that our latest forecast is around £30 million lower than the Scottish Government's last forecast.

Welsh forecast

3.31 As described above, our Welsh residential SDLT forecast is estimated using HMRC's residential SDM+ model and our UK-wide house price and residential transactions forecasts. Welsh commercial SDLT has been forecast using HMRC's commercial SDM+ model and our UK forecast for commercial property prices and transactions. As with the main SDLT forecast, we have brought forward the base year in the model for this forecast. We then include the assumed Welsh share of SDLT policy measures in order to produce a final post-measures forecast.

3.32 At this Autumn Statement there are no policy changes that have a significant impact on Welsh SDLT. The package of HMRC administration and operational measures raises a small amount of additional SDLT, but its impact on our Welsh SDLT forecast is negligible.

3.33 Table 3.5 shows that we expect Welsh SDLT to increase by 80 per cent between 2016-17 and 2021-22, reaching £319 million at the end of the forecast. Our residential forecast has been revised up in each year and is 12 per cent higher in 2020-21. This is offset by a large downward revision to our commercial forecast, which is 16 per cent lower.

Table 3.5: Welsh SDLT forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Total SDLT							
March 2016	165	202	225	245	266	287	
November 2016	150	198	221	240	261	289	319
Change	**-15**	**-4**	**-5**	**-5**	**-5**	**2**	**0**
Residential SDLT							
March 2016	87	110	127	141	158	173	
November 2016	80	118	139	154	172	194	220
Change	**-7**	**7**	**12**	**13**	**14**	**21**	
Commercial SDLT							
March 2016	78	92	99	103	108	114	
November 2016	70	80	81	86	89	95	99
Change	**-8**	**-12**	**-17**	**-17**	**-19**	**-19**	

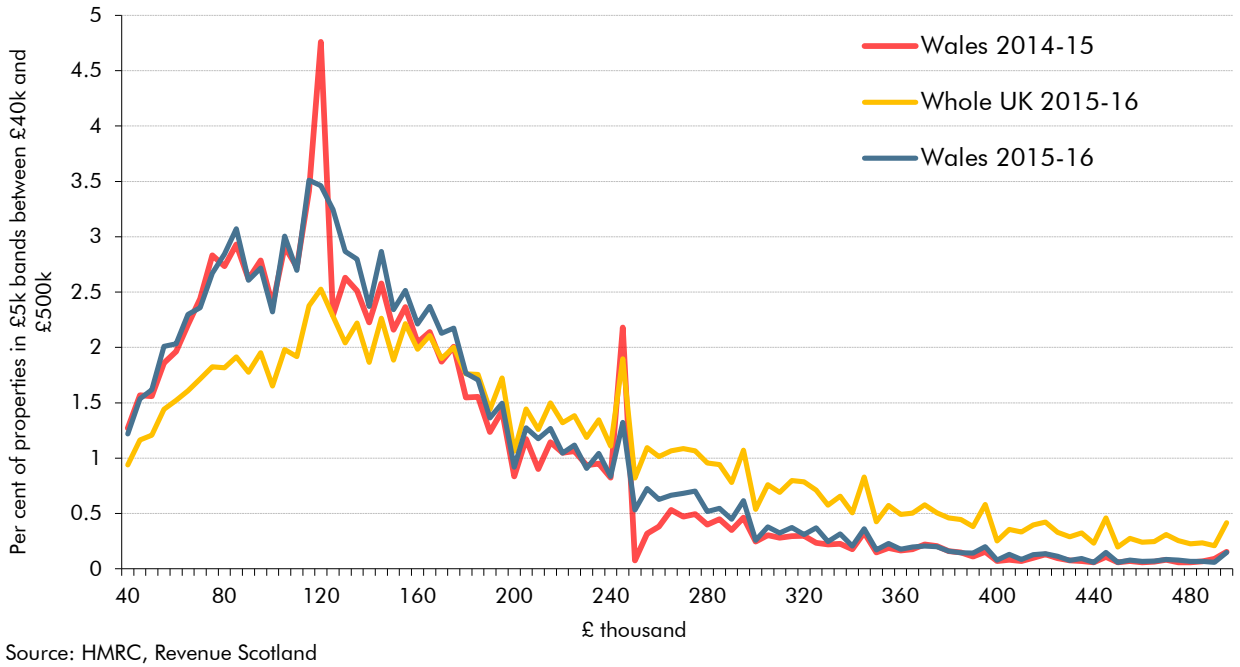
3.34 Table 3.6 shows that the only positive change in the residential forecast is due to the larger than expected yield from the additional property surcharge, which has been pushed through the forecast. All other changes have reduced receipts, including the latest receipts outturns and our new housing market forecasts.

Table 3.6: Changes in Welsh residential SDLT forecast since March

	£ million					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	87	110	127	141	158	173
November forecast	80	118	139	154	172	194
Change	**-7**	**7**	**12**	**13**	**14**	**21**
of which:						
Receipts outturn	-7	-4	-4	-5	-5	-6
House prices	0	-3	-6	-9	-9	-7
Property transactions	0	-10	-7	-5	-4	-1
Additional properties recosting	0	35	41	43	46	49
Modelling changes	0	-11	-12	-12	-14	-14

3.35 Chart 3.5 shows the price distribution of residential sales in Wales in 2015-16 compared to the UK including Scotland, and compared to the old Wales in 2014-15. The sharp distortions around the tax thresholds under the previous 'slab' regime have been reduced, though as in Scotland some clustering of transactions at 'round numbers' remains. The chart also shows that Wales has a larger proportion of transactions (around 40 per cent) between £40,000 and the first tax threshold (£125,000) than in the rest of the UK (around 30 per cent). This has two implications for the forecast. First, as these transactions are only taxable if they are subject to the additional properties surcharge, the proportion of total SDLT receipts from surcharge is proportionally greater in Wales than in the rest of the UK. Second, there is greater fiscal drag in Wales. As the thresholds are fixed in cash terms we forecast that price increases will over time lead to houses purchases that currently pay no SDLT becoming taxable.

Chart 3.5: Distribution of transactions by house price in Wales



Source: HMRC, Revenue Scotland

3.36 Table 3.7 shows large but offsetting changes in our Welsh commercial SDLT forecast. The largest changes are the modelling. In our March forecast we assigned a proportion of the 'slice' commercial property measure in line with the Welsh share of commercial property receipts. At the UK level, the policy was expected to raise revenue, which meant a positive effect on Welsh receipts in our March forecast. Any transaction with a value in excess of £1.05 million will pay more tax under the new regime while the reverse is true for transactions below that level. HMRC data show that the average price of a commercial transaction in Wales in 2015-16 was £703,000, while for the UK has a whole it was £1.16 million. The average is heavily skewed by very expensive transactions in London, where the average price is £2.78 million. HMRC has now modelled the policy using transaction-level data. Given the relatively lower prices in Wales, this has the expected effect of reducing the forecast. We have also fed through lower commercial prices and transactions in line with our UK forecast.

3.37 So far in 2016-17, commercial SDLT receipts in Wales have not been as adversely affected by the slowdown seen in parts of the commercial market, which have been most apparent in top-end London commercial property. This relatively strong in-year performance offsets much of the modelling and economic determinant changes set out above.

Table 3.7: Changes in Welsh commercial SDLT forecast since March

	£ million					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	78	92	99	103	108	114
November forecast	70	80	81	86	89	95
Change	**-8**	**-12**	**-17**	**-17**	**-19**	**-19**
of which:						
Receipts outturn	-8	16	16	17	18	19
Property martket determinants	0	-5	-11	-11	-12	-13
Modelling changes	0	-22	-22	-23	-24	-25

4 Environmental and transport taxes

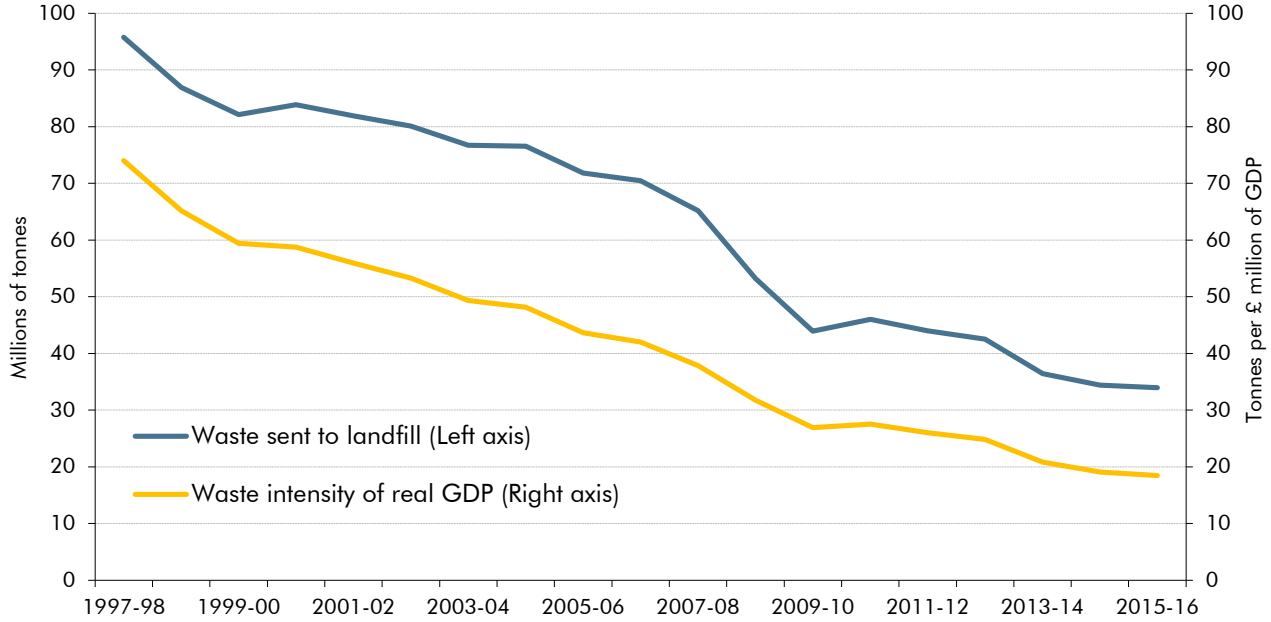
Landfill tax

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 forecast for UK 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 Since waste is largely a by-product of economic activity, we would expect growth in the tax base to be associated with GDP growth. And since the tax is paid on the volume of waste (per tonne), the relationship should be with real GDP. As Chart 4.1 shows, that relationship has been one of declining volumes of waste per unit of real GDP. Indeed, 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 34 million in 2015-16.

Chart 4.1: UK landfill waste tonnage relative to economic activity

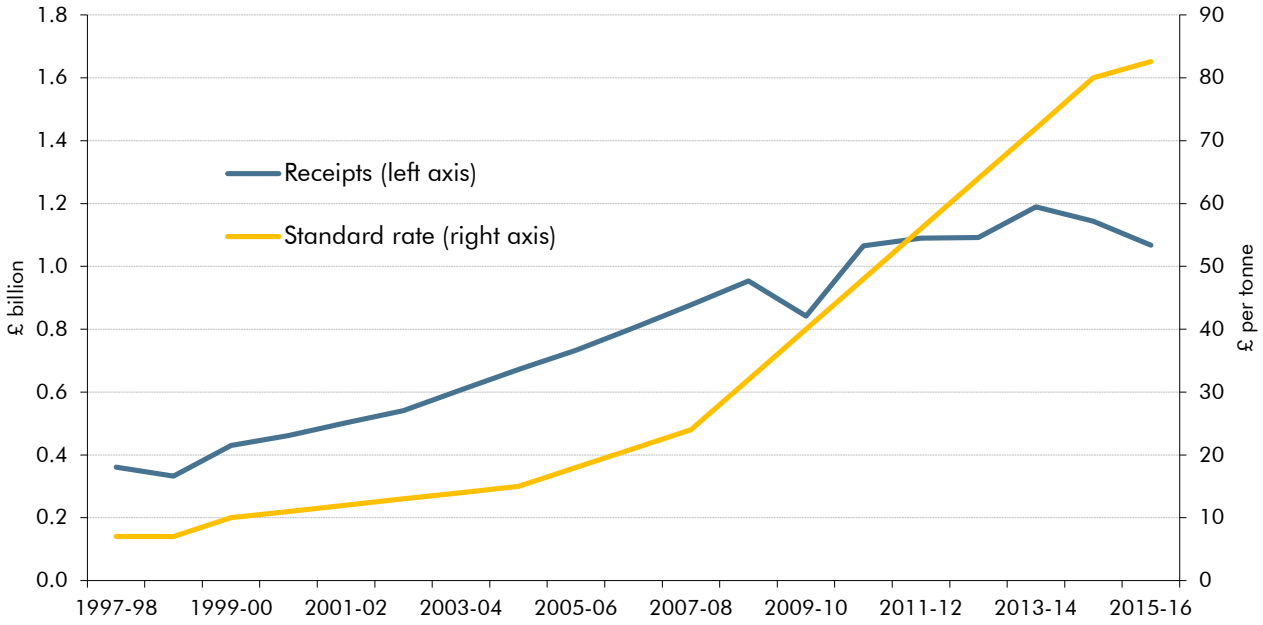


Source: HMRC, Revenue Scotland, ONS, OBR

4.3 Chart 4.2 shows landfill tax revenue collected by HMRC between 1997-98 and 2015-16. Landfill tax was fully devolved to the Scottish Parliament in April 2015, so the 2015-16 figure also includes taxes collected by Revenue Scotland. Despite a declining tax base,

receipts rose significantly for the first 15 years, mainly due to large increases in the duty rate. The standard rate has risen from £7 a tonne in 1997-98 to £82.60 for 2015-16 in both Scotland and the rest of the UK. Up until 2013-14 duty rate increases more than offset the reduction in the effective tax rate due to a steady decline in the proportion of waste sent to landfill that is subject to the standard rate – itself partly due to HMRC losing a court case that led to a narrowing of the scope of the standard rate. Receipts have fallen in the past two years, reflecting smaller increases in the standard rate, whilst the tax base has continued to decrease at a similar pace. Exempt and lower rate waste tonnages have been broadly flat over the period.

Chart 4.2: UK landfill taxes standard rate and receipts



Source: HMRC, Revenue Scotland

Scottish rate

4.4 Having been fully devolved in April 2015, Scottish landfill tax (SLfT) has replaced the UK equivalent in Scotland. In 2015-16, tax rates in both systems were equal. The Scottish Government's December 2015 draft Budget again set rates for 2016-17 to match those in the rest of the UK.

Welsh rate

4.5 The Welsh Government announced in its *Tax Collection and Management (Wales) Bill* in July 2015, its intention to replace landfill tax with a 'land disposals tax'. Further details of the tax are included in the Land Transaction Tax and Anti-Avoidance of Devolved Taxes (Wales) Bill currently going through the National Assembly for Wales. Our forecasts will reflect the new tax when details of any changes become sufficiently clear.

Methodology

4.6 The Scottish and Welsh landfill tax forecasts are produced by applying an assumption about the path of the Scottish and Welsh share of landfill tax to the UK forecast. The Scottish landfill tax forecast also takes into account the latest receipts outturn from Revenue Scotland.

4.7 As noted above, the UK forecast is compiled using a forecast for the tonnage of waste sent to landfill, which is multiplied by the appropriate tax rate. The tonnage forecast is generated from separate Department for Environment, Food and Rural Affairs (DEFRA) projections of municipal solid waste, where data quality is good, and commercial and industrial waste, where it is less so. The expected amount of municipal waste sent to landfill is estimated by comparing the cost of alternative waste treatment options. DEFRA's detailed models cover England, so are scaled up to get to a UK-wide forecast. The split between standard and lower tax rates is based on historical trends. The tax rates are assumed to be uprated in line with RPI inflation, consistent with the UK Government's default uprating assumption.

4.8 Five quarters of outturn data have been published by Revenue Scotland on Scottish landfill tax. This has allowed us to refine our methodology slightly. We continue to assume that receipts in Scotland follow the same profile as the rest of the UK, but we now use current year Scottish receipts to set the starting level of the forecast.

4.9 The Welsh share of landfill tax receipts is not readily available, since landfill operators submit data returns that cover sites across England, Wales and Northern Ireland. The Welsh share is calculated using data from Natural Resources Wales. This detailed dataset offers comprehensive coverage of waste sent to landfill in Wales. Data for Northern Ireland are sourced from the Department of the Environment Northern Ireland to allow us to complete the picture for total UK landfill tonnage and calculate the Scottish and Welsh shares.

4.10 We add the effect of any new policy measures to produce our post-measures forecast.

UK forecast

4.11 The latest available landfill tonnage data are shown in Table 4.1. As in our March forecast, 2013-14 remains the latest year of available data for the whole of the UK and shows a continuation in the downward trend. The UK total has fallen 37 per cent since 2006-07, while there have been steeper falls in both Scotland (43 per cent) and Wales (44 per cent).

Table 4.1: Landfill tonnage in the UK

	Tonnes (million)							
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	63.9	59.0	51.4	43.9	43.8	44.0	41.6	41.1
Scotland	7.1	7.0	5.7	4.7	4.6	4.6	4.4	4.1
Wales	3.8	3.1	2.8	2.5	2.3	2.2	2.2	2.1
Northern Ireland	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8
UK	76.3	70.5	61.2	52.2	51.8	51.8	49.1	48.2
	Per cent of UK total							
Scotland	9.4	9.9	9.4	8.9	8.8	8.9	8.9	8.4
Wales	5.0	4.4	4.6	4.7	4.4	4.2	4.4	4.4

4.12 The UK landfill tax forecast in Table 4.2 has been revised down since our March forecast. Receipts in the year to October were lower than expected, but recent large payments for historic liabilities has returned the forecast to broadly the position we expected in March. We have lowered the forecast from 2017-18 onwards to reflect growth in alternative treatment infrastructure for household waste. There are no measures in this Autumn Statement that affect landfill tax receipts.

Table 4.2: Landfill tax forecast (England, Wales and Northern Ireland)

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	956	905	824	821	837	853	
November 2016	884	918	799	704	654	623	614
Difference	-72	13	-25	-117	-182	-230	

Scottish landfill tax receipts outturn

4.13 Revenue Scotland has now published five quarters of receipts (monthly data are unavailable). Receipts for the first quarter of 2016-17 were £37.7 million, up 4 per cent on a year earlier. Receipts in the rest of the UK fell by 15 per cent over the same period. The difference is explained by a growth in the proportion of landfill waste in Scotland subject to the standard rate compared to the rest of the UK. In Scotland it has risen from 43 to 45 per cent while it has fallen in the rest of the UK from 42 to 36 per cent. Landfill receipts are normally evenly spread across months, so we would expect first quarter receipts to provide a reasonable signal of the strength of receipts in 2016-17 as a whole.

Scottish forecast

4.14 The forecast for Scottish landfill tax in Table 4.3 has increased in the short term relative to our March forecast. We expect receipts to rise in 2016-17, but then to return to the downward trend we assume in the rest of the UK forecast, driven by lower tonnages of waste being sent to landfill. This means our forecast from 2019-20 onwards is lower than in March. The Scottish share of receipts in 2016-17 (15 per cent) is higher than the latest available estimate of the overall share of waste tonnage sent to landfill shown in Table 4.1, reflecting a higher proportion of waste being standard rated.

4.15 Our March forecast was very close to the most recent 5-year forecast produced by the Scottish Government, in December 2015, in the early years of forecast. This forecast starts higher in 2016-17 and diverges further in the later years of the forecast. Part of the explanation is that the Scottish Government's forecast makes an allowance for its waste reduction targets. By 2025, these seek to reduce total waste generated to 85 per cent of their 2011 level and total disposals to landfill to 5 per cent of total waste generated. While we project a sharper downward trajectory than in our March forecast, our forecast remains higher than the Scottish Government's.

4.16 Our forecasts only take policy targets into account when the details of policies to deliver them have been announced and are accompanied with relevant supporting analysis and costings. Otherwise we consider them to be policy aspirations, and note them as fiscal risks. In this instance, if waste sent to landfill was to fall faster than we assume in accordance with the Scottish Government's targets Scottish landfill tax receipts would be lower.

Table 4.3: Scottish landfill tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	143	134	121	120	122	124	
November 2016	148	154	134	118	110	105	103
Difference	5	20	13	-2	-12	-19	

Welsh forecast

4.17 The Welsh landfill tax forecast in Table 4.4 moves in line with our UK forecast, but we have revised down the level of receipts relative to March. As in March, receipts are expected to fall in the next few years before rising again towards the end of the forecast.

4.18 The largest revision to receipts is due to a downward revision to the Welsh share of UK Government landfill tax receipts – by 1.0 percentage point to 3.8 per cent – as we have been able to base that estimate on more recent and more comprehensive data. In our previous forecasts, we used a share of landfill tax based on waste tonnages as estimated by HMRC. Our March forecast was based on the 2013-14 estimate that 4.8 per cent of landfill tonnage was disposed of in Wales. For this forecast we received analysis from the Welsh Government using data held by Natural Resources Wales for 2015-16. This showed a faster reduction in the total tonnage of waste taken to landfill in Wales than in the rest of the UK. Based on the classifications used by Natural Resources Wales the landfilled waste was also less likely to pay at the standard rate.[1] This is explained by recent additions to waste infrastructure leading to less local authority waste being subject to landfill. We assume the share of Welsh landfill tax revenue remains constant over the forecast period, so this revision affects all years on top of the effect of a lower UK forecast.

4.19 Once again, our forecast does not make allowance for the Welsh Government's aspiration to reduce landfill tonnage at a faster pace than in England. If specific policies are

[1] The classifications used by Natural Resources Wales do not map precisely to the tax regime.

announced that would be expected to lead to faster declines in landfill tonnage, we would consider them when producing our forecast. For now it is noted as a potential downside risk to this forecast.

Table 4.4: Welsh landfill tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	47	44	40	40	41	42	
November 2016	34	35	30	27	25	24	23
Difference	-13	-9	-10	-13	-16	-18	
of which:							
Welsh share	-9	-9	-8	-7	-7	-6	
UK forecast	-4	0	-2	-6	-9	-12	

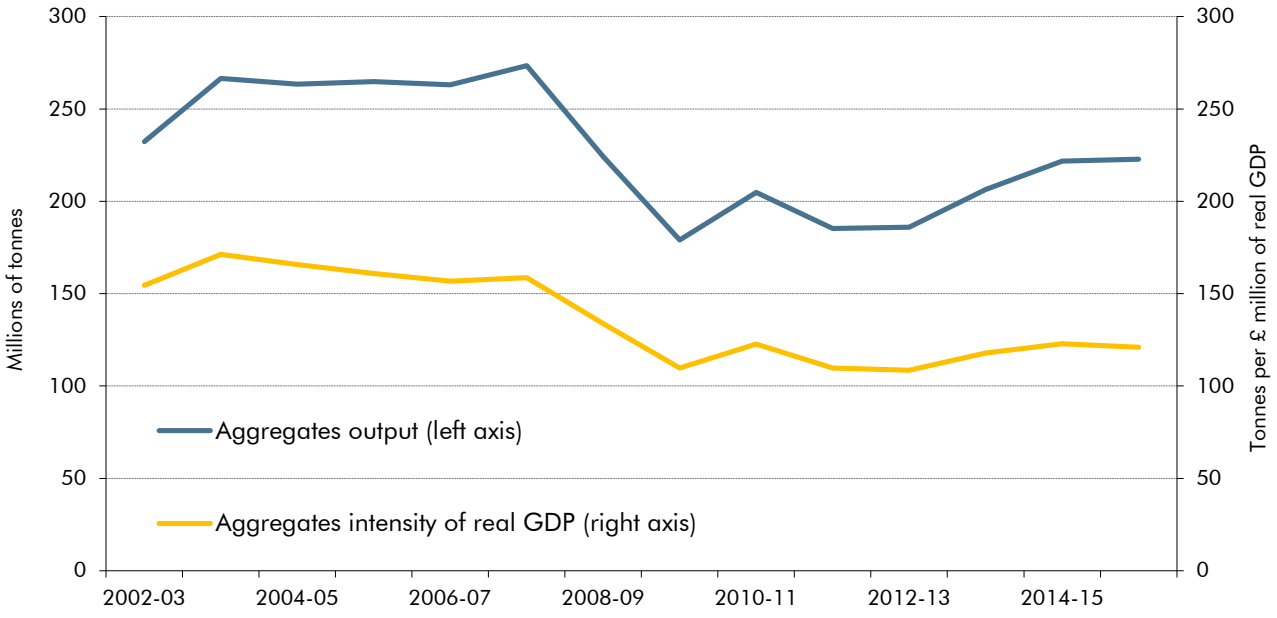
Aggregates levy

Trends in UK aggregates levy receipts

4.20 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 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.

4.21 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 again since then.

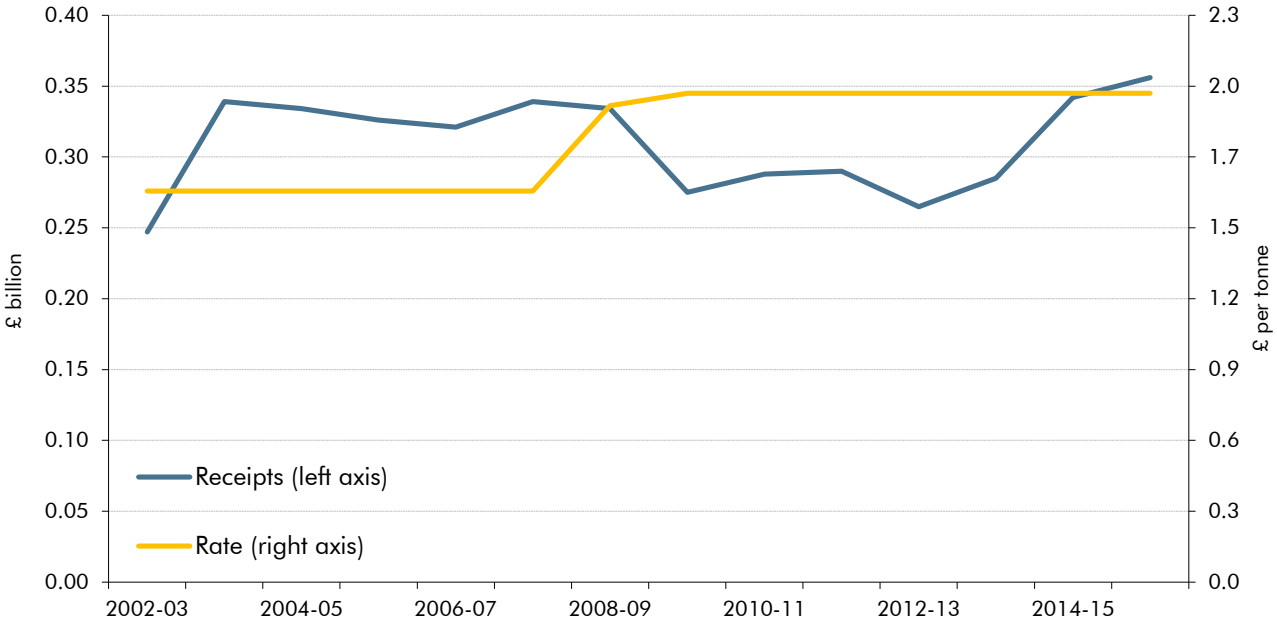
Chart 4.3: UK aggregates output relative to economic activity



Source:HMRC, ONS, OBR

4.22 As Chart 4.4 shows, aggregates levy receipts fell significantly after 2008-09 but have now returned to their pre-crisis levels. 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. With the rate per tonne frozen in recent years, receipts have been lifted by the pick-up in economic activity.

Chart 4.4: UK aggregates levy rate and receipts



Source:HMRC, OBR

Scottish and Welsh rates

4.23 The Government has legislated to devolve the aggregates levy to Scotland, to come into effect once the legal challenges affecting the levy are resolved. The Government has committed to keeping the devolution of aggregates levy to Wales under review and subject to the resolution of a legal challenge in the European courts it intends to devolve this tax in the future.

Methodology

4.24 The UK forecast is generated from a projection of the tax base that is multiplied by the tax rate. An econometric model relates the sales of primary aggregates to construction sector growth. The model also allows for use of recycled aggregates to increase over time and for substitution away from the extraction of primary aggregates. The tax rate is assumed to be uprated by RPI inflation, consistent with the UK Government's default uprating assumption.

4.25 To produce Scottish and Welsh aggregates levy forecasts, we apply our assumptions for their respective shares to the UK receipts forecast. These shares are estimated using data on the Scottish and Welsh share of aggregates production from the United Kingdom Mineral Yearbook, shown in Table 4.5.

Table 4.5: Aggregates tonnage in the UK

	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

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

UK forecast

4.27 Table 4.5 showed that aggregates tonnage across the UK has fallen 27 per cent since 2007-08. The decline has been significantly greater in Scotland (41 per cent) and Wales (38 per cent). Relative to our March forecast, tonnages have been revised down from 2017-18. This has been slightly offset due to the upward revision to our RPI inflation forecast, meaning faster rises in the tax rate. There are no policy measure that impact on aggregates levy in this Autumn Statement.

Table 4.6: UK aggregates levy forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	351	352	375	371	374	377	
November 2016	351	365	346	367	362	365	370
Difference	1	13	-29	-4	-12	-12	

Scottish forecast

4.28 Table 4.5 showed that the Scottish share of UK aggregates tonnage is relatively high, although it has fallen to below 15 per cent of the UK total in the last two years for which data are available. It fell slightly to 14.5 per cent in 2014-15, which we use as the basis for this forecast. As that share is assumed to remain constant, movements in the Scottish forecast follow the UK forecast very closely.

Table 4.7: Scottish aggregates levy forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	51	51	55	54	55	55	
November 2016	51	53	50	53	53	53	54
Difference	0	2	-5	-1	-2	-2	

Welsh forecast

4.29 Table 4.5 showed that the Welsh share of UK aggregates tonnage is also relatively high, and that it increased to 9.6 per cent in 2014-15. That higher share is used as the basis for this forecast and is the reason why the Welsh forecast has increased since March. Again, since the Welsh share is assumed to remain constant, the forecast profile follows that of the overall UK forecast.

Table 4.8: Welsh aggregates levy forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	30	30	32	32	32	32	
November 2016	34	35	33	35	35	35	35
Difference	4	5	1	3	3	3	

Air passenger duty

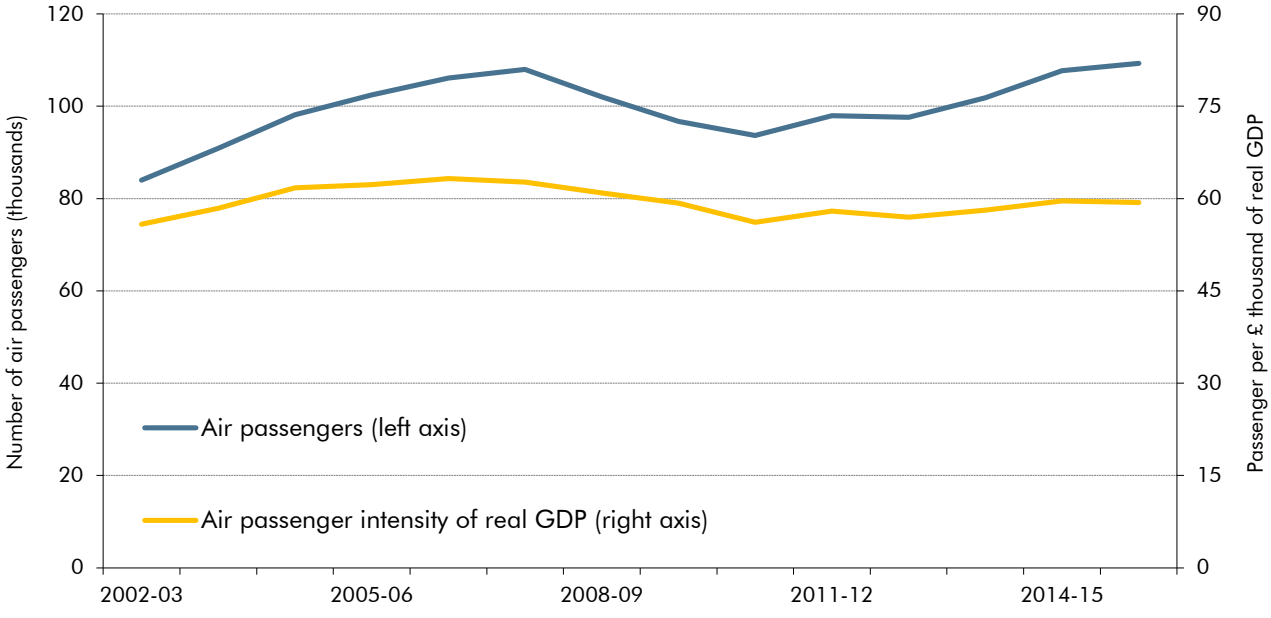
4.30 As set out in the introduction to this report, the Scotland Act 2016 includes provisions for the devolution of air passenger duty (APD) to Scotland in April 2018.

Trends in UK air passenger duty

4.31 APD is an excise duty that applies to all 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.

4.32 As Chart 4.5 shows, the number of air passengers departing UK airports fell sharply during the late 2000s recession before returning to 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 should be with real GDP. Chart 4.5 shows a stable relationship between air passengers per unit of real GDP.

Chart 4.5: UK passenger numbers relative to economic activity



Source:HMRC, ONS, OBR

4.33 Table 4.9 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. Table 4.9 also shows the estimated proportion of historic APD attributable to Scotland using methodologies developed by HMRC and the Scottish Government:

- the **HMRC approach** uses unpublished data from the Civil Aviation Authority (CAA) on the number of passengers departing from UK airports, with adjustments based on the latest CAA International Air Passenger Route Analysis data and the ONS international passenger survey for the flight band and exemptions for interconnecting passengers. The Scottish share based on this approach has fluctuated, but there has been a steady increase in recent years from 8.2 per cent in 2011-12 to 9.6 per cent in 2015-16; and

- the **Scottish Government approach** is presented in its 'Government expenditure and revenue Scotland' (GERS) publication. GERS also uses CAA data, but makes slightly different assumptions about the composition of the flight bands and interconnecting passengers. The share estimated in this way has been more stable at close to 9 per cent for the three most recent years.

Table 4.9: Air passenger duty historic receipts

	£ million						
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Scotland (HMRC)	166	180	214	229	269	300	296
Scotland (GERS)	153	185	228	244	270	290	275
UK	1,856	2,155	2,607	2,791	3,013	3,175	3,077
	Per cent of UK total						
Scotland (HMRC)	9.0	8.4	8.2	8.2	8.9	9.5	9.6
Scotland (GERS)	8.2	8.6	8.7	8.7	9.0	9.1	8.9

Scottish APD rates

4.34 Full devolution of APD to the Scottish Parliament will begin in April 2018. The previous Scottish Government pledged to reduce the APD rate by 50 per cent. It issued a consultation on this in March 2016. The current Scottish Government repeated this intention in its 2016 election manifesto but has not yet set out specific details or a timescale for implementation. When details of any changes become sufficiently clear, they will be reflected in our forecast.

4.35 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 could be significant behavioural effects that we would need to take into account as passengers chose to use different airports and flight routes.

Methodology

4.36 Our forecast for UK APD is driven by the estimated number of passengers across the different bands, to which is applied the appropriate tax rate. APD rates are set to rise in line with the RPI, rounded to the nearest pound, in line with the UK Government's stated uprating assumption. The forecast is therefore affected by our inflation forecast too. We include a separate adjustment in the model the increasing trend in the share of passengers using low-cost operators.

4.37 We take our central estimate of the share of APD revenue raised in Scotland as the mid-point between the 2015-16 estimates presented by HMRC (9.6 per cent) and the Scottish Government (9.1 per cent). This rate is assumed to remain constant across the forecast.

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

UK and Scotland forecasts

4.39 Table 4.10 sets out our UK APD forecast for UK. The UK forecast is slightly lower than our forecast in March 2016 mainly due to our lower forecast for GDP over the period. Our methodology means the Scottish forecast moves in line with the UK forecast, and both forecasts grow by 27 per cent from 2016-17 to 2021-22. There are not any policy measures that impact on APD in this Autumn Statement.

Table 4.10: UK air passenger duty forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	3088	3231	3349	3527	3680	3869	
November 2016	3039	3228	3350	3487	3653	3842	4037
Difference	-48	-3	1	-41	-27	-26	

Table 4.11: Scottish air passenger duty forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March 2016	289	302	313	330	344	362	
November 2016	284	302	313	326	342	360	378
Difference	-5	0	0	-4	-2	-2	