Office for
Budget Responsibility

Devolved taxes forecast

March 2017

1 Introduction

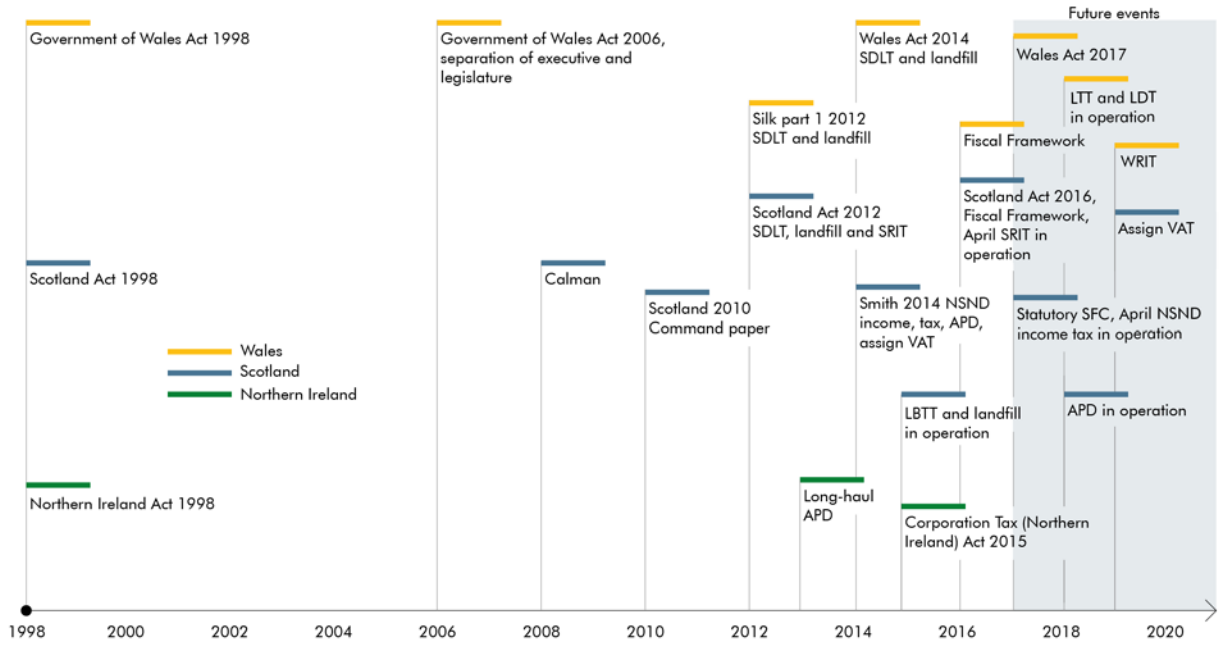
1.1 The Office for Budget Responsibility (OBR) was established in 2010 to provide independent and authoritative analysis of the UK's public finances. Alongside the UK Government's Budgets and Autumn Statements, we produce forecasts for the economy and the public finances. We publish these in our *Economic 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. These forecasts 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 (SDLT) and aggregates levy receipts.

1.5 In April 2015, 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). This replaced a 10p reduction from each rate of UK income tax, with rates set annually by the Scottish Parliament. The UK Government has legislated to devolve the aggregates levy to the Scottish Parliament, to come into effect after resolution of legal challenges affecting the levy.

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 non-savings non-dividend **income tax** than those in the 2012 Act, to begin in April 2017. The Scottish Parliament set rates and thresholds for this for the first time in February 2017 (see Chapter 2);
- **air passenger duty** in April 2018. The Scottish Government plans to replace this with an 'air departure tax';
- 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's fiscal framework. This establishes a mechanism for adjusting the Scottish Government's block grant to reflect the further devolution of tax and spending powers. It will be in place until

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

2021 when it is due to be reviewed by the two governments. The Scottish Government's block grant will continue to be determined via the 'Barnett' formula, but then adjusted 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 social security 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 the SRIT. In November 2015, the then Chancellor announced that devolution of the WRIT would no longer be subject to a referendum, as had originally been specified in the Act. The UK Government is also intending to devolve aggregates levy, again subject to the resolution of ongoing 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 includes forecasts for SDLT, landfill tax, aggregates levy and the WRIT.

1.13 We work with the Welsh Government to ensure that we can bring all relevant information to bear in producing our Welsh tax forecasts.

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

Tax Collection and Management (Wales) Act 2016

1.14 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 Government will replace SDLT with a 'land transaction tax' and landfill tax with a 'landfill disposals tax'. Specific details of these taxes, such as their rates and thresholds, have not yet been announced. Our forecasts will reflect these taxes when details of any changes are sufficiently clear.

The Wales Act 2017

1.15 The Wales Act 2017 removes the requirement for a referendum before the WRIT can be introduced. The WRIT will be implemented from April 2019. It also increases the Welsh Assembly's borrowing powers and sets out the OBR's right to information from the devolved Welsh authorities.

Welsh Government fiscal framework

1.16 In December 2016 the Welsh and UK Governments agreed the Welsh Government's fiscal framework. This establishes a mechanism for adjusting the Welsh Government's block grant to reflect the devolution of tax powers. The block grant will be determined via the 'Barnett' formula plus a new 'needs-based factor' as recommended by the Holtham Commission.[3] The block grant is then adjusted as set out in the fiscal framework. Again, the OBR has no direct involvement in block grant decisions or adjustments, so we do not discuss any such changes in this document.

Northern Ireland

1.17 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 NIE 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.

1.18 We plan to work with analysts in HM Revenue and Customs (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 has estimated that £768 million of UK CT receipts in 2013-14 could be attributed to Northern

[3] Formally, the 'Independent commission on funding and finance for Wales'.

Ireland, which is higher than HMRC's estimate of £485 million for the same year. HMRC estimates that figure increased to £569 million in 2015-16.[4]

1.19 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, with a further cut to 17 per cent due in April 2020. We would anticipate there being 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 a reduction in the rate in Northern Ireland. 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.

1.20 Air passenger duty on direct long-haul flights departing from airports in Northern Ireland was devolved to the NIE from January 2013, and has been set to zero.

Forecast methodology and process

1.21 We published a methodology note in March 2012 that described how we planned to forecast Scottish tax receipts.[5] 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 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.

1.22 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 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 can be expected to have a disproportionate impact on a particular tax stream in Scotland or Wales, or there is evidence pointing to different trends in an underlying tax base. The exceptions to this are our LBTT and Scottish landfill tax forecasts, for which we are able to take into account outturns since the devolution of these taxes in April 2015.

1.23 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.

1.24 The OBR's role in forecasting started several years ahead of the initial devolution of taxes to Scotland and Wales. This has allowed us to develop and improve forecasts in light of experience and the availability of new information sources. We still consider these

[4] The differences are likely to be explained by the use of alternative methodologies. The NIE'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.

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

methodologies to be work-in-progress and will continue to look for further improvements. We hope that the expansion of the Scottish Fiscal Commission forecasting remit will help to further that process more rapidly.

Policy costings

1.25 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.[6]

1.26 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.

1.27 We follow the same approach for our devolved tax forecasts. For UK Government policies that affect a devolved tax, we ask that the relevant effect is estimated with supporting evidence. For a policy change in a devolved tax, we scrutinise a 5-year costing and only include it in our forecast if we consider it reasonable and central. We would not include a devolved tax policy if it was not deemed a firm commitment – for example before it had been announced, with precise details, 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 specific year of the forecast. If we cannot include the effects in our central forecast, we would note them as a fiscal risk.

Forecast process

1.28 The process for producing this devolved tax forecast has been as follows:

- **HMRC officials and OBR staff produced draft Scottish and Welsh tax forecasts** using our pre-measures 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 SFC and the Scottish and Welsh Governments on 6 and 20 February; and

[6] See *Briefing paper No.6: Policy costings and our forecast* for a detailed description of this process.

- **in the final week before the Budget, 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 Budget 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.

1.29 The Scottish Government produced its most recent 5-year forecast for receipts from Scottish income tax, LBTT and Scottish landfill tax in its Draft Budget in December 2016, following scrutiny by 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 each chapter.

Summary of forecasts

1.30 Table 1.1 summarises the main UK-level economic determinants that affect our devolved tax forecasts. Subsequent tables summarise those forecasts by country and by tax.

Economic determinants of the tax forecast

1.31 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.

1.32 Tables 1.1 and 1.2 sets out the key economic determinants of the devolved taxes forecast and how they have changed since our November forecast. Regarding the UK's exit from the EU, we have retained the same assumptions that underpinned our November forecast, which are consistent with a range of possible outcomes.

1.33 In summary:

- cumulative **nominal GDP** growth between 2016-17 and 2021-22 has been revised down 1.2 percentage points relative to our November forecast. This reflects our judgement that activity in the economy is now running slightly above its sustainable level (which very slightly reduces cumulative real GDP growth looking forward) and weaker GDP deflator growth (reflecting revisions to the terms of trade and weaker government consumption deflator growth);

- our forecast of **wages and salaries** is driven by growth in average earnings and employment. Wages and salaries are forecast to grow by 3.4 per cent a year on average between 2016-17 and 2021-22, down slightly from our November forecast. This partly reflects changes to our forecast of the composition of employment growth, which has been tilted towards more self-employed and fewer employees, in line with recent trends;

- the CPI measure of **inflation** is slightly higher in 2017 and slightly lower in 2018 than we forecast in November. This reflects movements in sterling, oil prices and utility

prices, while UK Government policy changes are also expected to raise inflation on both measures in the near term – and more so for RPI inflation (see Box 3.2 of the *EFO*). CPI inflation remains above the 2 per cent target until 2019-20. We continue to expect RPI inflation to be higher than CPI inflation throughout the forecast period because of differences in the ONS approach to constructing the two measures;

- **house price inflation** has been revised up in the short term in line with a pick-up in leading indicators, but is little changed thereafter. **Residential property transactions** have also been revised up in the short term; and

- we still expect **commercial property prices** to fall in 2016-17 and 2017-18, reflecting developments at the top end of the market since the referendum, but to a lesser extent than we forecast in November. We have moved our **commercial property transactions** forecast to a seasonally adjusted measure, in line with HMRC's published statistics. Transactions rise slightly less than in our November forecast, reflecting recent outturns.

Table 1.1: Key determinants of the devolved taxes forecast

	Percentage change on previous year, unless otherwise specified						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
GDP							
Real GDP	1.9	2.0	1.8	1.6	1.8	1.9	2.0
Nominal GDP	2.8	4.2	3.3	3.3	3.5	3.8	4.0
Inflation							
RPI (September)	0.8	2.0	3.9	3.4	3.1	3.1	3.2
CPI (September)	-0.1	1.0	2.6	2.2	2.0	2.0	2.0
Income tax							
Average earnings	1.8	2.6	2.6	2.8	3.0	3.5	3.7
Employment (millions)	31.4	31.8	31.9	32.1	32.2	32.4	32.5
Property							
Residential property prices	6.3	7.4	5.8	4.0	4.5	4.5	4.7
Residential property transactions (000s)	1321	1164	1280	1294	1305	1315	1322
Commercial property prices	11.9	-4.0	-2.8	1.6	1.7	1.9	1.9
Commercial property transactions	4.4	4.5	1.7	1.7	1.8	1.9	2.0

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

	Percentage change on previous year, unless otherwise specified						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
GDP							
Real GDP	-0.1	0.0	0.5	-0.2	-0.3	-0.1	0.0
Nominal GDP	0.2	0.5	0.7	-0.8	-0.5	-0.2	-0.1
Inflation							
RPI (September)	0.0	0.0	0.7	-0.1	0.0	0.0	0.0
CPI (September)	0.0	0.0	0.1	-0.3	0.0	0.0	0.0
Income tax							
Average earnings	0.0	0.1	0.2	-0.2	-0.4	-0.2	-0.1
Employment (millions)	0.0	0.0	0.1	0.2	0.1	0.1	0.2
Property							
Residential property prices	0.0	0.3	2.1	-0.2	-0.2	-0.2	-0.1
Residential property transactions (000s)	-8	35	80	52	35	13	4
Commercial property prices	0.0	1.1	0.4	-0.5	-0.2	-0.1	-0.1
Commercial property transactions	-0.3	-2.2	0.4	-0.2	-0.3	-0.1	0.0

Summary of forecasts by country

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

Table 1.3: Summary of March 2017 Scottish tax forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax	4,389	4,474	11,718	11,995	12,384	12,935	13,595
LBTT	416	478	553	601	653	715	780
Scottish landfill tax	148	154	149	122	113	110	109
Aggregates levy	51	53	51	54	54	54	55
Air passenger duty	284	301	316	327	342	359	377
Total	5,288	5,461	12,786	13,099	13,546	14,174	14,915

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

Table 1.4: Summary of March 2017 Welsh tax forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax	1,896	1,907	1,950	1,993	2,056	2,143	2,248
SDLT	152	203	243	263	282	311	343
Landfill tax	34	33	28	25	23	22	22
Aggregates levy	34	35	33	36	35	36	36
Total	2,115	2,178	2,255	2,317	2,396	2,512	2,650

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

Summary of forecast by tax

1.35 Tables 1.5 to 1.9 summarise our forecasts tax-by-tax.

Table 1.5: Income tax forecast for UK, Scotland and Wales

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Whole UK NSND income tax	155,916	159,179	164,197	168,649	174,736	182,400	191,791
of which:							
Scottish income tax (full NSND basis)	11,160	11,313	11,718	11,995	12,384	12,935	13,595
Welsh income tax (WRIT basis)	1,896	1,907	1,950	1,993	2,056	2,143	2,248
UK excluding Scottish income tax	144,756	147,867	152,479	156,654	162,352	169,464	178,197
UK excluding Scottish and Welsh income tax	142,860	145,960	150,529	154,661	160,296	167,322	175,948

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

Table 1.6: Property transaction tax forecast for the UK, Scotland and Wales

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Whole UK property transaction taxes	11,129	11,891	13,446	14,380	15,292	16,399	17,570
of which:							
Scottish LBTT (SDLT already devolved)	416	478	553	601	653	715	780
Welsh SDLT	152	203	243	263	282	311	343
UK excluding Scottish LBTT	10,713	11,413	12,893	13,779	14,639	15,684	16,790
UK excluding Scottish LBTT and Welsh SDLT	10,561	11,210	12,650	13,515	14,357	15,372	16,447

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

Table 1.7: Landfill tax revenue for the UK Government after devolution

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Whole UK landfill taxes	1,032	1,016	896	802	746	727	715
of which:							
Scottish landfill tax (already devolved)	148	154	149	122	113	110	109
Welsh landfill tax	34	33	28	25	23	22	22
UK excluding Scottish landfill tax	884	862	747	680	633	616	606
UK excluding Scottish and Welsh landfill taxes	851	829	719	655	610	594	585

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

Table 1.8: Aggregates levy revenue for the UK Government after devolution

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Whole UK aggregates levy	351	369	351	375	370	374	380
of which:							
Scottish aggregates levy	51	53	51	54	54	54	55
Welsh aggregates levy	34	35	33	36	35	36	36
UK excluding Scottish aggregates levy	300	315	300	320	317	320	325
UK excluding Scottish and Welsh aggregates levy	267	280	266	284	281	284	289

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

Table 1.9: Air passenger duty revenue for the UK Government after devolution

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Whole UK air passenger duty	3,039	3,219	3,373	3,499	3,651	3,833	4,026
of which:							
Scottish duty	284	301	316	327	342	359	377
UK excluding Scottish duty	2,755	2,918	3,057	3,172	3,310	3,474	3,649

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

Structure of the document

1.36 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 raised in the UK excluding Scotland; and
- **Chapter 4** presents our forecast of Scottish landfill tax and the Welsh share of landfill tax raised in the UK excluding Scotland, 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 The Scottish Government's income tax 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).

2.2 The Scottish income tax rates must be set every 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 responsibility of taxpayers to tell HMRC their correct address. HMRC has confirmed that the operation of Scottish income tax is on track, including compliance provision for different tax levels in Scotland and the rest of the UK.

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 maintained 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 three rates – basic, higher and additional – 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 replicate the effect of increasing the allowance by creating a zero rate band. From 2017-18 onwards the Scottish Government retains full NSND income tax liabilities from taxpayers in Scotland. All other income tax revenues remain reserved.

2.5 As part of its Budget process the Scottish Government announced rates and thresholds for the Scottish NSND income tax for 2017-18. We have adjusted our forecast to reflect these announcements, the effects of which are detailed in this chapter.

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 removes the need for a referendum prior to the implementation of income tax devolution and, following the publication of the Welsh Government's fiscal framework in December 2016, Welsh rates of income tax will be devolved from April 2019. The 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 every 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 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. 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 public sector finances data; 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. These historically derived shares are adjusted for factors that can be forecast, such as the different effect of policy measures that affect specific sections of the income distribution. In this forecast we have introduced an adjustment for differences in expected population growth, so that the overall share is driven by an assumption that relative per capita trends are fairly constant but population shares vary. 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 policy measures announced. We have included the Scottish Government's changes to the higher rate threshold first, then policy changes announced by the UK Government at this Budget.

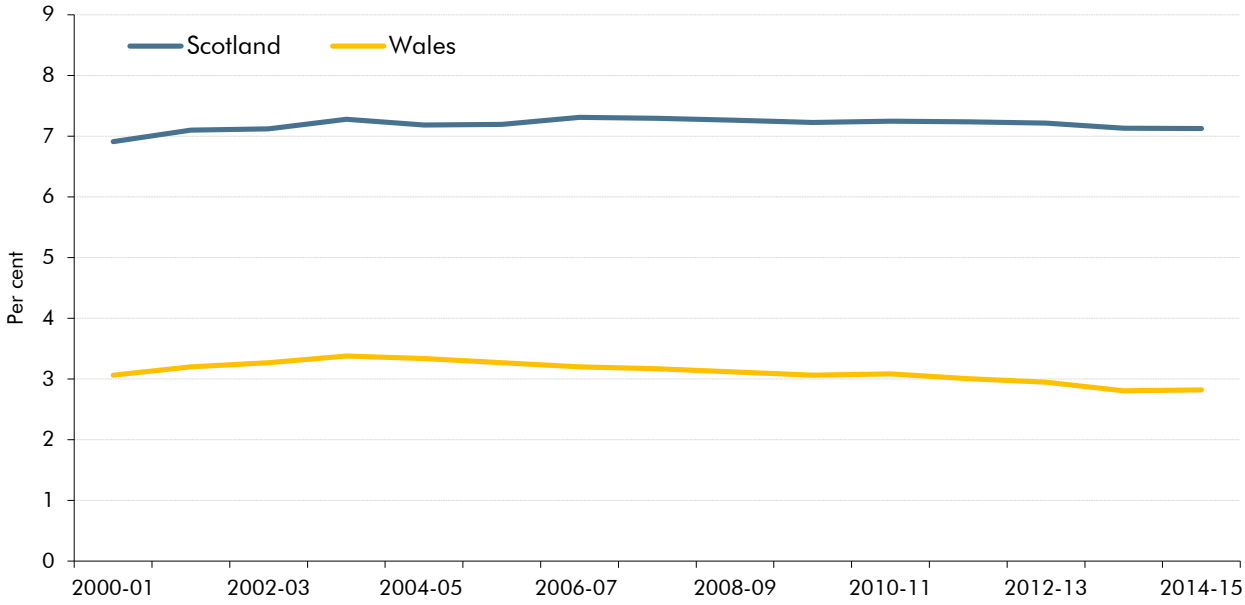
Scottish and Welsh shares of income tax

2.11 Our estimates of the Scottish and Welsh shares of UK income tax use historic information from the Survey of Personal Incomes (SPI), an annual survey based on a sample of around 700,000 individuals in contact with HMRC during the course of the year through the PAYE, SA or repayment claim systems. The SPI data are published with a long lag. Since our November forecast, the 2014-15 SPI data have become available, which we have incorporated in this forecast.

2.12 As well as this lag, 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 captured in the SPI to actual receipts received by HMRC. This error was 0.5 per cent in 2013-14, but increased to 2.0 per cent in 2014-15. HMRC is currently developing its real-time information (RTI) reporting for the entire population of PAYE income taxpayers. We hope that outputs from this project will help to inform our forecasting of Scottish and Welsh income tax by providing more up-to-date information on the Scottish and Welsh shares, as well as information about developments in the earnings distribution.

2.13 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 been fairly stable at close to 7.2 per cent in most years, with a gradual decline in recent years. 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. Based on 2013-14 data, in November we assumed a 2014-15 Scottish share of NSND income of 7.40 per cent. The 2014-15 SPI reports that the share was actually 7.28 per cent. The Welsh share has been declining since peaking in 2003-04 at 3.4 per cent. It reached 2.8 per cent in 2014-15. 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 all income tax receipts



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

2.14 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 markets trends, the distribution of income and the effect of Government policy decisions.

Population growth

2.15 Trends in population growth differ across the countries of the UK, with the Scottish and Welsh populations assumed to grow more slowly than the rest of the UK in the latest ONS principal population projections, due to lower life expectancy, fertility and net international migration. The respective adult population projections are set out in Table 2.1. In this forecast, we have changed our methodology to reflect these projected differences in population growth by adjusting the share of income by the relative adult population share. This reduces the projected Scottish and Welsh shares of income tax liabilities.

2.16 We have chosen to use the projection for adults aged 16 and over for this adjustment, but similar results would be obtained using the total or working-age population. The adjustment would be slightly greater if we focused on those in the peak earnings age range of 30 to 59. This is a relatively simple adjustment that we feel will improve 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.

Table 2.1: ONS principal populations for adult population (2014 base)

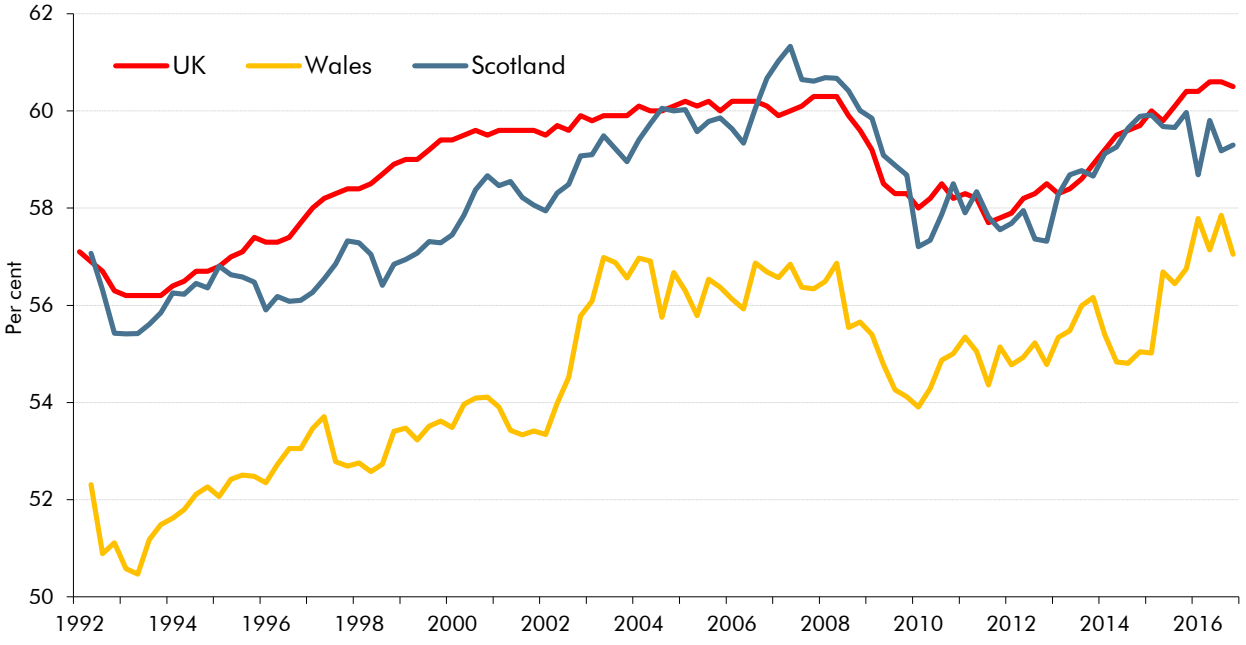
	Population over 16								
	Millions					Per cent of UK			
	England	Wales	Scotland	NI	UK	England	Wales	Scotland	NI
2014-15	44.01	2.54	4.44	1.46	52.44	83.93	4.84	8.46	2.78
2015-16	44.40	2.55	4.45	1.47	52.86	83.98	4.82	8.43	2.77
2016-17	44.73	2.56	4.47	1.48	53.23	84.03	4.80	8.39	2.77
2017-18	45.04	2.56	4.48	1.48	53.57	84.08	4.78	8.37	2.77
2018-19	45.33	2.57	4.49	1.49	53.88	84.12	4.77	8.34	2.77
2019-20	45.61	2.58	4.51	1.50	54.19	84.17	4.75	8.31	2.77
2020-21	45.90	2.58	4.52	1.51	54.50	84.21	4.74	8.29	2.76
2021-22	46.19	2.59	4.53	1.51	54.83	84.25	4.72	8.27	2.76

Note: We assume the ONS mid-year population is a reasonable proxy for the population at the start of the financial year.

Labour market trends

2.17 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, 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

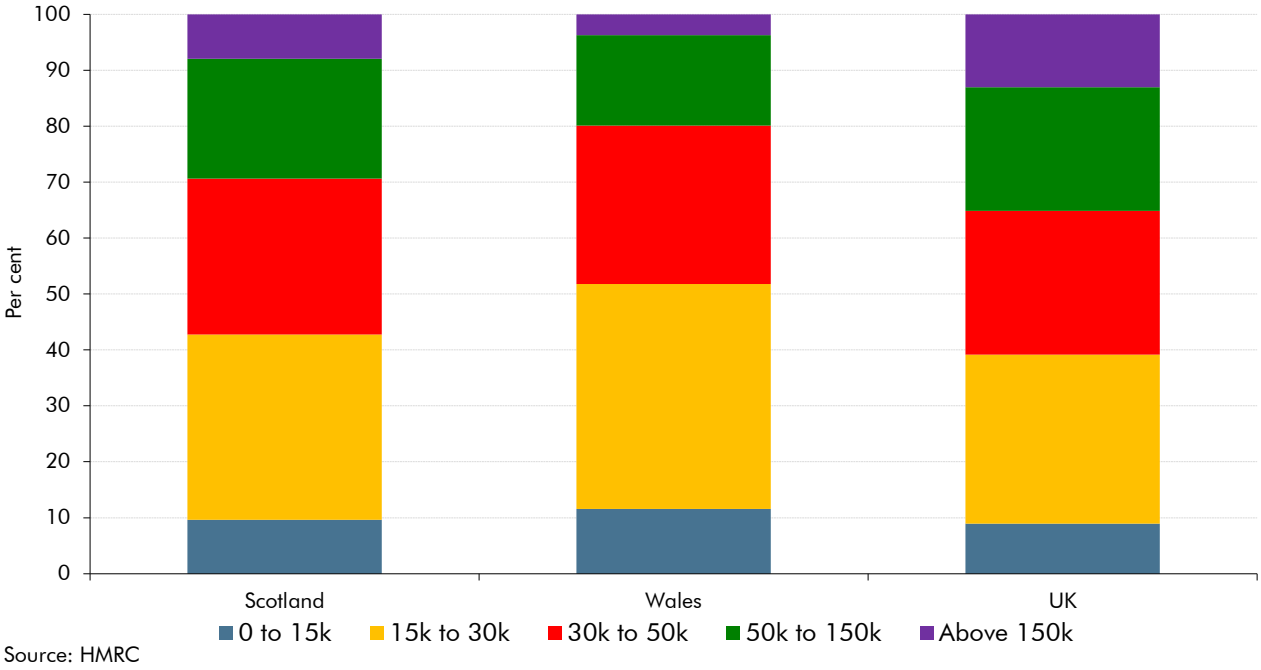


Source: ONS

The income distribution

2.18 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 2014-15 SPI. There has been relatively little change since the 2013-14 SPI, with a slight decrease in those earning less than £15,000 in all three countries. 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 2.3: Proportion of total taxpayer income by income bands



Source: HMRC

The effects of Government decisions

2.19 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, 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.

UK forecast

Pre-measures forecast changes

2.20 Table 2.2 shows the UK forecast of tax liabilities on NSND income prior to including the effects of any policy measures in this Budget. It has been revised down in 2015-16 (reflecting 2016-17 NSND self-assessment receipts, which relate to 2015-16 liabilities). Revisions are relatively small up to 2018-19, but from 2019-20 onwards the forecast has been revised down by increasing amounts. In 2021-22, our forecast for UK tax liabilities on NSND income is £3.6 billion lower than we expected in November.

2.21 Our pre-measures forecast changes reflect several factors:

- **economic determinants**: we have revised GDP and earnings growth up in the first half of the forecast period (in light of stronger outturn data and a revised judgement about the labour share of national income), but then down towards the end of the forecast (because we see less spare capacity opening up over the next couple of years, which means less scope for above-trend growth thereafter). We have also increased our forecast of relative self-employment growth. These forecasts are set out in more detail in Chapter 3 of our main *EFO*;

- **in-year SA receipts for NSND income**: while total 2016-17 SA cash receipts (covering 2015-16 liabilities) were in line with our November forecast, dividend tax payments were higher, caused by greater-than-expected forestalling ahead of the tax rise pre-announced in the July 2015 Budget. Receipts on NSND income were around £1 billion weaker than forecast. Preliminary analysis of SA returns suggests that the effective tax rate on non-dividend elements of SA income was lower than expected. Self-employment has risen strongly in recent years, but that rise has been concentrated at the lower end of the income distribution. We have assumed that the 2015-16 shortfall in SA from NSND income is structural and pushed it through the forecast;

- **in-year NSND PAYE receipts**: we have raised our 2016-17 estimate by £1.3 billion, which is pushed into future years. But this only partly reverses the sharp downward revision in our November forecast and is more than offset by weaker average earnings growth by the end of the forecast;

- **modelling changes to the estimated effect of incorporations**: we have further refined the incorporation model so that it now readily produces estimates of the gross impact of incorporations on the tax paid on different types of income, rather than just the overall net effect on SA income tax. This reduces NSND income because incorporation increases dividend income at the expense of profit income of the self-employed. This modelling change reduces the UK NSND income tax liabilities forecast by increasing amounts over the forecast period, reaching £2.3 billion in 2021-22. Given the uncertainty surrounding this modelling, we will continue to work on potential refinements to the assumptions underpinning our forecasts;

- **recosting of past measures**: we routinely recost the effects of past measures so that they are consistent with our latest forecast assumptions and new information about how measures are performing. The most notable recosting for NSND income tax in this forecast relates to the pensions flexibility measure originally announced at Budget 2014. Receipts have been higher than expected and we have revised our forecast up by nearly £700 million in 2017-18. But we assume that initially higher withdrawals will largely unwind so that by 2020-21 the upward revision is only around £100 million; and

- **PAYE repayments and repayments to pension providers**: data since our November forecast suggest that repayments will be around £0.3 billion higher than previously assumed in 2016-17. This is pushed through the forecast.

Table 2.2: 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
November forecast (excluding November measures) (a)	150.9	156.9	159.4	162.9	168.9	176.5	185.2	195.2
March forecast (inc November measures)	150.9	155.9	159.2	164.2	168.7	174.8	182.5	192.0
March forecast (excluding November measures) (b)	150.9	155.9	159.2	163.9	168.2	174.5	182.2	191.7
Forecast difference (b - a)	0.0	-1.0	-0.2	1.0	-0.7	-2.0	-3.0	-3.6
March forecast post-measures forecast	150.9	155.9	159.2	164.2	168.6	174.7	182.4	191.8

UK Government policy measures

2.22 The UK Government has announced a number of policy measures that affect NSND income tax liabilities in this Budget.[1] The largest are:

- '**Class 4 NICs: increase to 10% from April 2018 and 11% from April 2019**' – while this policy does not directly change the NSND income tax regime, the costing factors in a behavioural response from taxpayers – including via the incentive to incorporate – that reduces income tax liabilities;

- '**Dividends allowance: reduce to £2,000 from April 2018**' – similar to the NICs measure, this policy only affects NSND income tax via taxpayer behaviour. In this case the incentive to incorporate is slightly reduced, increasing income tax liabilities; and

- '**Making tax digital: one year deferral for businesses with turnover below the VAT threshold**' – 'making tax digital' is an operational package originally announced in November 2015. This measure delays some aspects of its implementation and reduces self-assessed income tax on self-employed income.

[1] The estimates presented in this chapter are on a liabilities basis whereas the estimates for the UK public finances that are reported in Table 2.1 of the UK Government's Budget document are on a National Accounts receipts basis, so are not directly comparable.

Scottish forecast

Pre-measures forecast

2.23 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. As Table 2.3 shows, the share has been revised down in all years. This reflects two factors:

- we have estimated the effect of lower projected **population growth** in Scotland relative to the UK as a whole, as shown in the latest ONS population projections. On a full NSND basis from 2017-18 onwards, this reduces the Scottish share by 0.17 percentage points by the end of the forecast; and

- we have incorporated **new information from the 2014-15 SPI**, in which the Scottish share has fallen relative to 2013-14 and our previous assumption. This lower starting point also reduces the Scottish share in the forecast period, by 0.11 percentage points from 2017-18 onwards.

2.24 These pre-measures shares do not factor in the effects of the Scottish and UK Government policy measures that are described below.

Table 2.3: Pre-measures Scottish 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
November forecast	2.98	2.95	2.94	7.35	7.35	7.36	7.37	7.37
March forecast	2.94	2.91	2.88	7.15	7.14	7.12	7.11	7.10
Change	-0.04	-0.04	-0.06	-0.19	-0.22	-0.24	-0.26	-0.28
of which:								
Scottish share - indexing to population growth	0.00	-0.01	-0.02	-0.08	-0.10	-0.13	-0.15	-0.17
Scottish share - new SPI	-0.04	-0.03	-0.03	-0.11	-0.11	-0.11	-0.11	-0.11
Index relative popuation growth (2014-15 = 100)	*100.00*	*99.60*	*99.23*	*98.91*	*98.59*	*98.29*	*98.01*	*97.76*

Effect of Scottish Government policy measures

2.25 Our previous forecasts of Scottish income tax have been produced on the basis of existing UK Government rates and thresholds over the forecast period. We noted the Scottish Government's intention with regards to the higher rate tax threshold, but did not reflect it in our central forecast pending a formal policy statement in the Scottish Budget process. In this year's process, the Scottish Government has announced that:

- in 2017-18 it will hold **the higher rate threshold** for NSND income unchanged in cash terms at £43,000 – below the level set by the UK Government of £45,000. In its Draft Budget, it proposed to hold the threshold flat in real terms (so £43,430 in cash terms), but this was changed during the Parliamentary processes that followed the Draft

Budget. In this section we describe how we have factored the effects of the final decision into our Scottish and UK receipts forecasts; and

- the **effective personal allowance** will reach £12,750 in 2021-22. While powers over the personal allowance have not been devolved, the Scottish Government can raise the *effective* personal allowance by introducing a zero per cent band of income tax. We have not factored the cost of this policy into our central forecast because the Scottish Government has advised us that the path it set out to reach it was only indicative – based on assuming that the UK Government meets its own commitment to raise the personal allowance to £12,500 in 2020-21 and presenting an illustrative straight-line path up to that point. Until the UK Government sets out its firm policy on that path, we note both the UK and Scottish policy commitments as fiscal risks rather than including them in our central forecast.

2.26 Table 2.4 sets out the rates and thresholds that we have used for this forecast.

Table 2.4: NSND income tax parameters

	£, unless otherwise stated				
	2017-18	2018-19	2019-20	2020-21	2021-22
Basic rate (per cent)	20	20	20	20	20
Higher rate (per cent)	40	40	40	40	40
Additional rate (per cent)	45	45	45	45	45
Personal allowance					
Scottish Government	11,500	11,800	12,070	12,310	12,560
UK Government	11,500	11,800	12,070	12,310	12,560
Difference	*0*	*0*	*0*	*0*	*0*
Higher rate threshold					
Scottish Government (NSND)	43,000	44,115	45,105	45,995	46,915
UK Government	45,000	46,200	47,270	48,210	49,260
Difference	*2000*	*2085*	*2165*	*2215*	*2345*
Personal allowance taper	100,000	100,000	100,000	100,000	100,000
Additional rate threshold	150,000	150,000	150,000	150,000	150,000

The higher rate threshold

2.27 The Scottish Government has announced that the higher rate threshold in Scotland for 2017-18 will be lower than in the rest of the UK. Reducing the higher rate threshold will increase tax revenue as more income in Scotland will be taxed at the 40 per cent rate. In this section we describe how the effect of this decision was costed. We have followed the standard approach we use when certifying UK Government costings for our UK-wide medium-term forecasts. This involves establishing the tax base, estimating a 'static' yield by applying the new tax thresholds to that base, then considering any behavioural responses from taxpayers that are likely to alter that static yield. We have looked at the effects on both devolved income tax liabilities and our UK-wide receipts forecast.

2.28 As Table 2.4 shows, the UK and Scottish higher rate thresholds in 2017-18 will be £45,000 and £43,000 respectively. We have uprated both in line with CPI inflation thereafter, which means the cash differences between them increase slightly over the forecast.

2.29 The static costing was estimated using HMRC's Personal Tax Model, restricted to Scottish taxpayers only. This is a micro-simulation of taxpayers based on the SPI, with incomes grown from the base year in line with our UK-level forecasts for wages and salaries, employment and mixed income. The model is run twice to calculate total revenue on two bases: first applying existing UK Government tax parameters to Scottish taxpayers and second applying the Scottish Government's new parameters. The difference between the two gives the static costing. It rises from £135 million in 2017-18 to £171 million in 2021-22, as reported in Table 2.5. This process is relatively simple, with the main uncertainty relating to the SPI data used in the base year and how they are projected forward.

2.30 We then apply a series of adjustments to factor in likely behavioural responses from taxpayers. Given the relatively small cash amount of the tax rise, these adjustments are all relatively small too. They could of course be much larger for bigger changes or for changes that target higher earners that are more likely to be able to shift income in response to tax policy changes. For this forecast we have considered two main forms of behaviour:

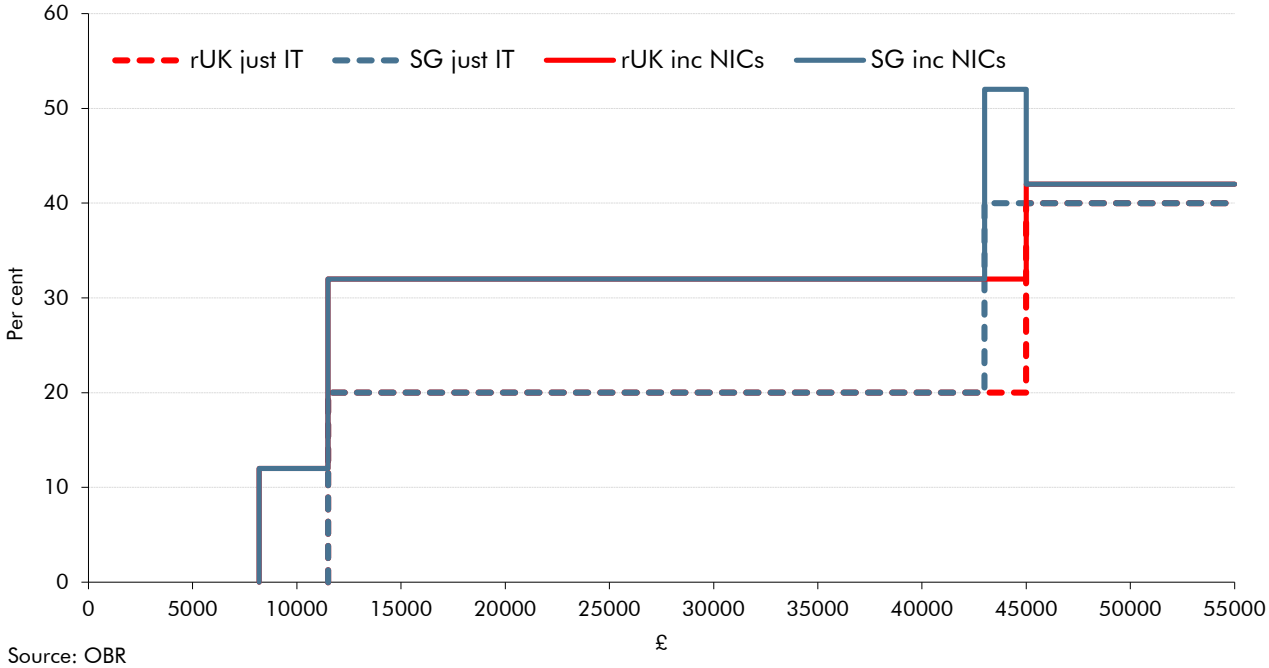
- **taxable income responses where a higher *marginal* tax rate will be paid**. The incentive to earn and report additional taxable income is affected by the post-tax earnings on additional hours worked; and

- **taxable income responses where a higher *average* tax rate will be paid**. The incentive to earn and report taxable income in Scotland versus the rest of the UK (or other countries) is affected by the overall tax paid on that income.

2.31 In applying taxable income elasticities (TIEs) in this costing, we separated taxpayers into two groups.[2] First, those taxpayers with NSND incomes in between the two higher rate thresholds. This group will face a higher marginal tax rate due to employee national insurance contributions (NICs) being levied at 12 per cent up to the UK Government's higher rate threshold. As Chart 2.4 shows, whereas in the rest of the UK a basic rate taxpayer's marginal tax rate is 32 per cent (20 per cent for income tax plus 12 per cent for employee NICs) and a higher rate taxpayer's marginal rate is 42 per cent (40 plus 2), in Scotland there will now be a narrow band of higher rate taxpayers subject to a 52 per cent marginal rate (40 plus 12). Our estimate of the effect of the policy includes a behavioural response due to this higher marginal rate, which reduces UK Government NICs receipts and Scottish NSND income tax. These effects are relatively small because, in line with past estimates of TIEs appropriate to this point in the earnings distribution, we use a TIE of 0.05.

[2] For more information on the use of taxable income elasticities and behaviour responses more generally see our *Briefing paper No.6: Policy costings and the forecast*.

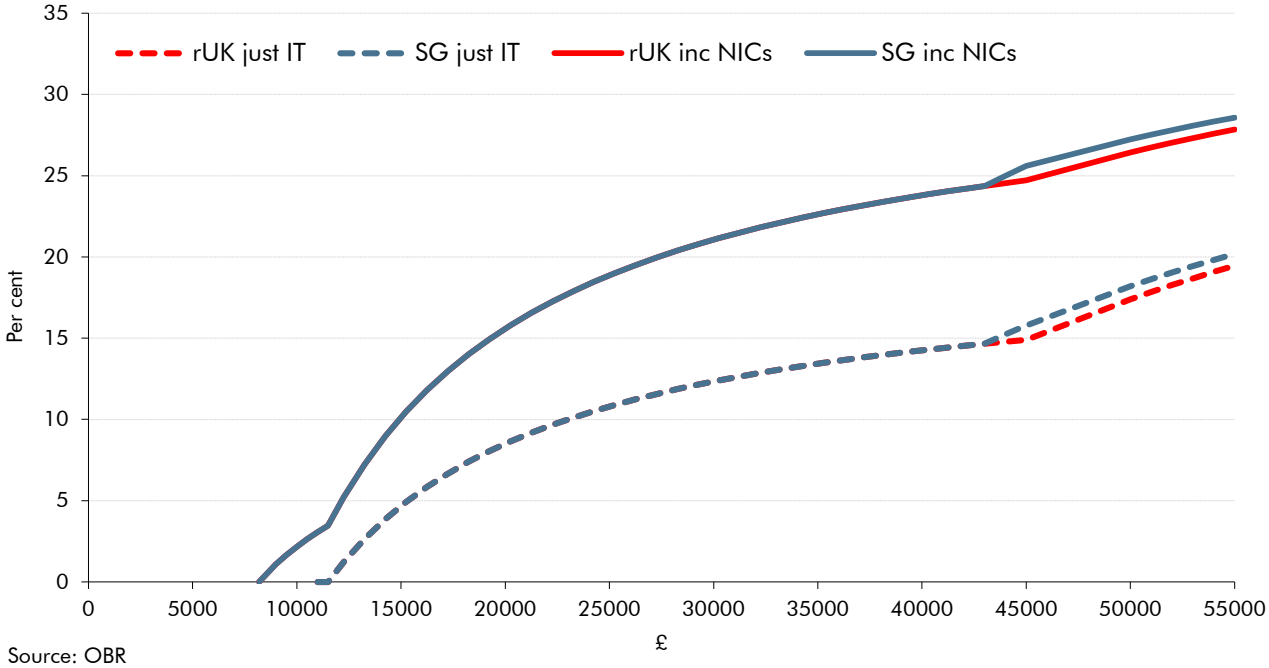
Chart 2.4: Marginal NSND income tax rates in the UK and Scotland



Source: OBR

2.32 As well as this response to changes in the marginal tax rate, we consider the effect of the average or effective tax rate. In 2017-18, all Scottish income taxpayers with NSND earnings of more than £45,000 will pay £400 more income tax. As Chart 2.5 shows, for those earning close to the threshold the increase in the effective tax rate will be just under 1 percentage point. We assume a TIE of 0.06 to estimate the effect of this change, so it also small relative to the static costing.

Chart 2.5: Effective tax rates on earnings in the UK and Scotland



Source: OBR

2.33 Next we considered the effect on incentives for higher earners to incorporate rather than retain employee or self-employment status, which is affected by the difference between tax rates on employment and corporate income. This affects both our Scottish income tax forecast (entirely negatively because after incorporation income is taxed either as dividends or corporate profits) and our UK-wide forecast (also negatively, but not entirely, because dividends and corporate profits are taxed less heavily than employment income). The estimate of this effect was negligible for the costing.

2.34 We also considered the possible effect of forestalling by higher earners – bringing forward income into 2016-17 so that it is taxed at the lower rate – and of taxpayers choosing to locate in the rest of the UK rather than Scotland. For forestalling, the impact is small, in part because income shifting is more prevalent for dividend income than the NSND income relevant to our Scottish tax forecasts. For migration, we felt that the tax rise (around £400 a year) was too small to prompt many Scottish taxpayers to choose to move or many individuals or households intending to move to or from Scotland to change their plans. This effect could clearly be much greater if the size of the tax rise was bigger or it affected those higher up the earnings distribution, who may be more willing and able to change their tax domicile in response to policy changes.

2.35 Table 2.5 sets out the effect of the Scottish Government's higher rate threshold policy on our Scottish income tax forecast on a liabilities basis. Table 2.6 sets out the effect on our UK-wide receipts forecast on a National Accounts basis (see paragraph 2.8 for explanation of the differences between these two accounting treatments).

Table 2.5: Scottish Government higher rate threshold policy costing (liabilities basis)

	£ million					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Static costing	0	135	136	146	156	171
Reduction due to behaviour	neg	-9	-7	-8	-9	-9
of which:						
Marginal rate behaviour		-4	-4	-5	-5	-5
Effective rate behaviour		-4	-4	-5	-5	-5
Other behaviours	neg	neg	neg	neg	neg	neg
Post-behavioural costing	**neg**	**126**	**129**	**137**	**147**	**163**

Table 2.6: Scottish Government higher rate threshold policy costing effect on UK forecast (National Accounts basis)

	£ million					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Static costing		123	141	145	154	171
Reduction due to behaviour	neg	-11	-12	-12	-12	-13
of which:						
Marginal rate behaviour		-6	-6	-6	-6	-6
Effective rate behaviour		-5	-6	-6	-6	-6
Other behaviours	neg	neg	neg	neg	neg	neg
Post-behavioural costing	**neg**	**112**	**129**	**133**	**142**	**158**

2.36 We have focused on the implications of the policy decision for our tax forecasts. The Scottish Government in its response to the Scottish Parliament's Finance Committee has published an estimate of the impact of policy decisions on the overall spending power of the Scottish Government. This is not comparable to the information presented above as it includes consequential adjustments to the Scottish Government's block grant.

The effective personal allowance

2.37 As set out above, the Scottish Government's stated policy aim is for an effective personal allowance higher than that implied by the UK Government's default uprating assumption. If implemented against this baseline, it would reduce Scottish and UK income tax receipts since less income would be subject to the basic rate of income tax.

2.38 The Scottish Government's income tax forecasts are based on the UK Government's commitment to raise the personal allowance to £12,500 in 2020-21. The personal allowance is automatically uprated in line with CPI inflation each year, and rounded to the nearest £10. In our main *EFO*, we noted the £12,500 policy commitment as a risk to our forecast because the UK Government has not yet set out how it intends to meet it. We estimate that raising the personal allowance to £12,500 in that year – from the £12,310 assumed in our central forecast – would reduce UK-wide income tax receipts by around £1.3 billion. Simply applying our current central forecast for the Scottish share to that figure would imply a reduction in Scottish income tax revenue of around £95 million. The effect on overall spending power would also reflect the associated adjustment to the block grant.

2.39 We estimate that the cost of the Scottish Government using a zero-rate band to raise the effective personal allowance from the £12,560 assumed in our central forecast for 2021-22 to £12,750 would be around £100 million on a liabilities basis. This would imply that the extra revenue raised from the higher rate threshold policy would be sufficient to meet the cost of a higher personal allowance.

2.40 But if the UK personal allowance had already reached £12,500 in 2020-21 and CPI inflation was 2 per cent (in line with the UK Government's inflation target), then normal uprating would take it very close to the Scottish Government's aim for the level in Scotland in 2021-22. On this basis, there would be no additional cost of meeting the Scottish Government's target for the effective personal allowance in that year.

Effect of UK Government policy measures

2.41 There are three UK Government policy measures in this Budget with an impact on Scottish income tax that is greater than £3 million, thereby meeting the convention the Treasury uses on its scorecard for reporting measures individually rather than considering them 'negligible'. For most measures, we assume that share of their effect on Scottish income tax is around the 7 per cent of total UK income tax used in our pre-measures forecast. The exception in this forecast is the Class 4 NICs measure, where the share has been based on the relevant income from self-employed taxpayers in Scotland using the 2014-15 SPI. This is

slightly lower than the total share of income at 6.5 per cent. The effect of lowering the dividend tax allowance comes via the reduced incentive to incorporate.

2.42 A number of other measures have smaller effects that in total are less than £3 million in any year.

Table 2.7: Effect of UK Government policy changes on Scottish income tax since November

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Pre-measures forecast	4474	4526	11718	11997	12392	12944	13609
Total UK Government policy change		neg	neg	neg	-8	-9	-14
of which:							
Class 4 NICs		neg	neg	neg	-9	-23	-34
Dividends allowance		neg	neg	neg	10	17	23
Making tax digital delay		neg	neg	neg	-10	-3	-3
Post-measures forecast	4474	4526	11718	11995	12384	12935	13595

Final post-measures Scottish income tax forecast

2.43 On the basis of the pre-measures revisions to the Scottish share of income tax and the new measures announced by the Scottish and UK Governments since our November forecast, Table 2.8 sets out our new forecast for Scottish income tax liabilities. These are based on the full devolution of NSND income tax liabilities that will operate from 2017-18 onwards. The SRIT will only operate in 2016-17, so we only show the forecast up until that point.

2.44 The table shows that there have been four significant sources of downward revision: the lower Scottish share in the latest SPI data for 2014-15 and due to our new approach to factoring in relative population growth; the effect on NSND income of refining our incorporations model; and the downward revision to our UK-wide income tax forecast. Partly offsetting that is the revenue raised by the Scottish Government's decision to freeze the higher rate threshold in cash terms in 2017-18 and a lower estimate cost of past measures due to the lower Scottish share reported in the latest SPI data.

Table 2.8: Changes in 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
November forecast	11000	11381	11525	11768	12220	12770	13432	14181
March forecast	10893	11160	11313	11718	11995	12384	12935	13595
Change	**-107**	**-221**	**-212**	**-50**	**-225**	**-386**	**-497**	**-586**
of which:								
Scottish share - population growth	0	-46	-90	-130	-175	-222	-271	-323
Scottish share - new SPI	-173	-182	-184	-187	-189	-195	-205	-217
NSND forecast - new TMI modelling	0	0	-48	-45	-80	-119	-167	-165
NSDN forecast - other changes	0	-70	30	119	29	-21	-48	-88
Other (including gift aid estimates and previous measures)	66	77	77	69	63	42	56	58
Scottish Government policy measures	0	0	0	126	129	137	147	163
UK Government policy measures	0	0	neg	neg	neg	-8	-9	-14
November forecast SRIT [1]	*4422*	*4541*	*4590*	-	-	-	-	-
March forecast SRIT [1]	*4389*	*4474*	*4526*	-	-	-	-	-

[1] SRIT will only operate in 2016-17.

Comparison with Scottish Government forecasts

2.45 In December 2016, as part of the Draft Budget process, the Scottish Government produced its first 5-year forecast for Scottish NSND income tax, covering the period from 2017-18 to 2021-22. Their forecast was updated in February 2017 to account for the higher rate threshold change with all other aspects remaining unchanged. Our forecast is lower than the Scottish Government's in all years, with the difference relatively small in 2017-18 at 1.4 per cent, but getting bigger over the forecast period and reaching 6.9 per cent in 2021-22. There are a number of reasons why our forecasts differ:

- **timing and data**. In this forecast we were able to adjust for recent economic and receipts data. While the economy has held up better than expected, the SA tax returns data received by HMRC in January point to weaker-than-expected NSND income within the relatively strong overall tax receipts. The Scottish Government completed its forecast before that information was available. The Scottish Government forecast was also completed before the 2014-15 SPI was published;

- **policy baselines**. The Scottish Government's forecast does not include measures announced at this Budget, but it does assume that the UK Government will raise the higher rate threshold and personal allowance to £50,000 and £12,500 respectively by 2020-21, in line with the policy commitments it has set out. These are noted as risks to our forecast until the UK Government sets out how it intends to meet them. We have also updated our CPI inflation forecast since November, which means the thresholds are uprated by different amounts; and

- **modelling differences**. The Scottish Government employed a more 'bottom-up' micro-simulation forecast, while we use a more 'top-down' estimate building up the forecast from specific receipts streams (i.e. PAYE, SA, repayments) with specific components estimated from HMRC's micro-simulation. As well as these different modelling approaches, we have incorporated different judgements into our models. This leads to many differences, which might work in both directions. For example, the Scottish Government uses separate earnings growth assumptions for the private and public sectors, but then assumes growth is uniform across the income distribution. We use a whole economy earnings growth forecast that is determined in the knowledge of public-sector pay policy during the Spending Review period, but also include specific assumptions about differences in growth rates across the income distribution. This includes an assumption that growth at higher incomes will be reduced due to the effect of Brexit on the financial and related sectors.

Table 2.9: Income tax forecast comparison

	£ million				
	2017-18	2018-19	2019-20	2020-21	2021-22
Scottish Government February forecast	11857	12320	12943	13681	14595
OBR March forecast	11718	11995	12384	12935	13595
Difference	139	325	559	746	1000
Difference (per cent)	*1.2*	*2.6*	*4.3*	*5.5*	*6.9*

Welsh forecast

2.46 Table 2.10 shows our forecast for the Welsh share of income tax. The 2014-15 SPI data published in February 2016 indicated a lower Welsh share of 1.26 per cent. We have also applied the same population adjustment method as we have in the Scottish forecast, whereby we adjust the Welsh share to growth in the adult population in Wales relative to the UK as a whole.

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
November forecast	1.27	1.26	1.25	1.24	1.24	1.25	1.25	1.25
March forecast	1.26	1.23	1.22	1.21	1.20	1.20	1.19	1.19
Change	**-0.02**	**-0.02**	**-0.03**	**-0.04**	**-0.04**	**-0.05**	**-0.05**	**-0.06**
of which:								
Welsh share - indexing to population growth	0.00	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04	-0.04
Welsh share - new SPI	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Index relative popuation growth (2014-15 = 100)	100.00	99.35	98.77	98.21	97.68	97.25	96.83	96.45

2.47 Table 2.11 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 and that the Scottish Government's change in the higher rate threshold has

a negligible knock-on effect on Welsh income tax. As in the Scottish forecast, the increase in Class 4 NICs, which results in taxpayer behaviour that reduces income tax, is largely offset by the cut in the dividends allowance, which increases NSND income tax by reducing the incentive to incorporate. All other measures either individually or in aggregate are negligible. The effects of measures are estimated by applying the appropriate Welsh share.

Table 2.11: 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)	1896	1907	1950	1994	2057	2144	2251
Class 4 NICs		neg	neg	neg	neg	-4	-6
Dividends allowance		neg	neg	neg	neg	3	4
Net effect of other measures		neg	neg	neg	neg	neg	neg
Welsh income tax liabilities (post-measures)	1896	1907	1950	1993	2056	2143	2248

2.48 Table 2.12 provides a breakdown of the other changes in the Welsh income tax forecast since November. As with the Scottish forecast, the downward revision to Welsh income tax is due to four main reasons: the lower Welsh share in the latest SPI data for 2014-15 and due to our new approach to factoring in relative population growth; the effect on NSND income of refining our incorporations model; and the downward revision to our UK-wide income tax forecast. The Welsh share of gift aid costs has been estimated by HMRC to be slightly lower than the share of population at 4 per cent. Gift aid repayments are estimated to cost around £25 million a year.

Table 2.12: Changes in Welsh income tax since November

	£ million							
	Outturn	Forecast						
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	1886	1928	1941	1981	2057	2151	2264	2387
March forecast	1873	1896	1907	1950	1993	2056	2143	2248
Change	**-13**	**-31**	**-34**	**-30**	**-64**	**-96**	**-122**	**-138**
of which:								
Welsh share - population growth	0	-13	-24	-36	-49	-60	-73	-86
Welsh share - new SPI	-25	-20	-21	-21	-21	-22	-24	-25
NSND forecast - new TMI modelling	0	0	-8	-8	-14	-20	-28	-28
NSDN forecast - other changes		-12	5	20	5	-4	-8	-15
Other (including gift aid estimates and previous measures)	12	13	15	15	15	11	14	14
UK Government policy measures	0	0	neg	neg	neg	neg	neg	neg

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** which change the tax calculation from being due on the entire amount to a proportion of the amount over a given threshold – like income tax. 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;

- **modifications to reliefs and exemptions**, including the withdrawal of sub-sale relief arrangements; and

- the introduction of a 3 per cent **supplement on additional dwellings** (such as second homes and buy-to-let properties) from April 2016, matching the surcharge on additional dwellings introduced by the UK Government in the same month.

Residential property

3.3 The Scottish Government announced LBTT rates and bands for 2017-18 in its December 2016 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;

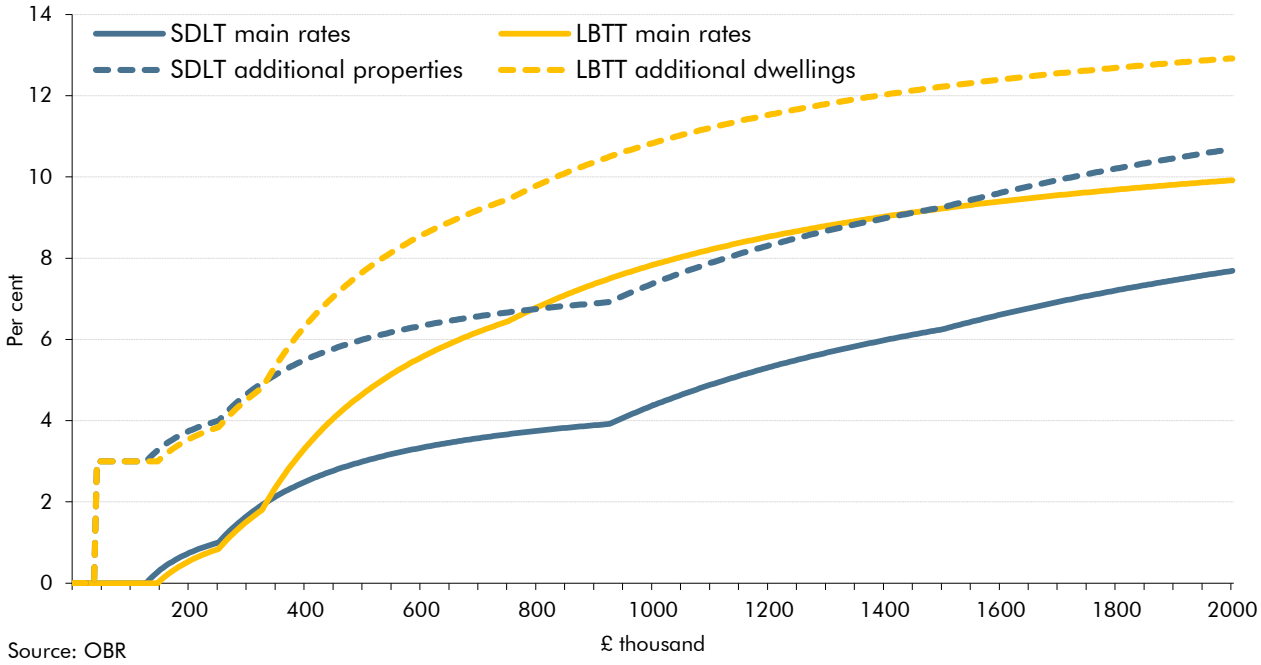
- 5 per cent on the portion above £250,000 up to £325,000;

- 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 The Scottish Government's 3 per cent additional dwellings supplement (ADS) applies to all transactions from £40,000, even those that would otherwise be exempt from LBTT. For example, a £100,000 purchase of a buy-to-let property would be subject to the 3 per cent ADS but exempt from LBTT if purchased as a primary residence.

3.5 Chart 3.1 shows how the amount of tax paid on transactions at different property prices differs between the regime in Scotland and the UK. 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 in both regimes is higher.

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

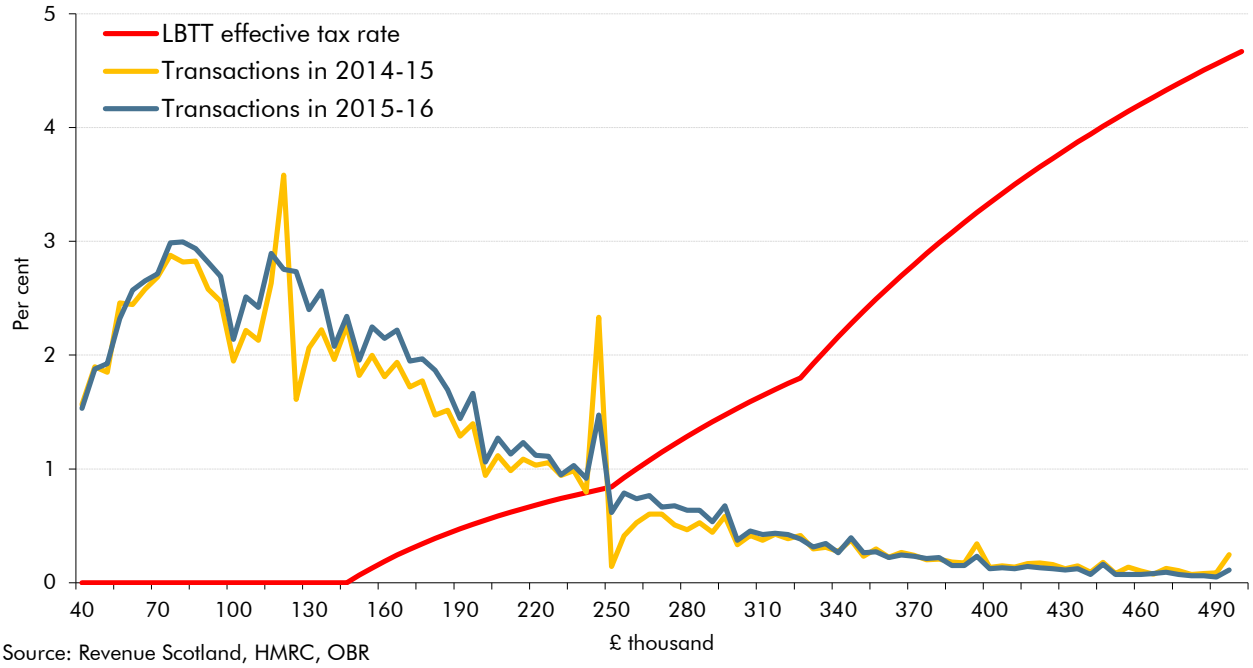


Source: OBR

3.6 Chart 3.2 shows the 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. For the majority of property transactions in Scotland there would be a zero per cent LBTT rate. Few transactions would be subject to the 10 and 12 per cent rates. The distribution of transactions is smoother under LBTT than it was under the previous SDLT 'slab' regime where there are noticeable spikes at the £125,000 and £250,000 thresholds. This is consistent with the assumptions made in our December 2014 *EFO* about 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. The

difference in the distributions might also be due to forestalling ahead of the introduction of LBTT in April 2015.

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



Source: Revenue Scotland, HMRC, OBR

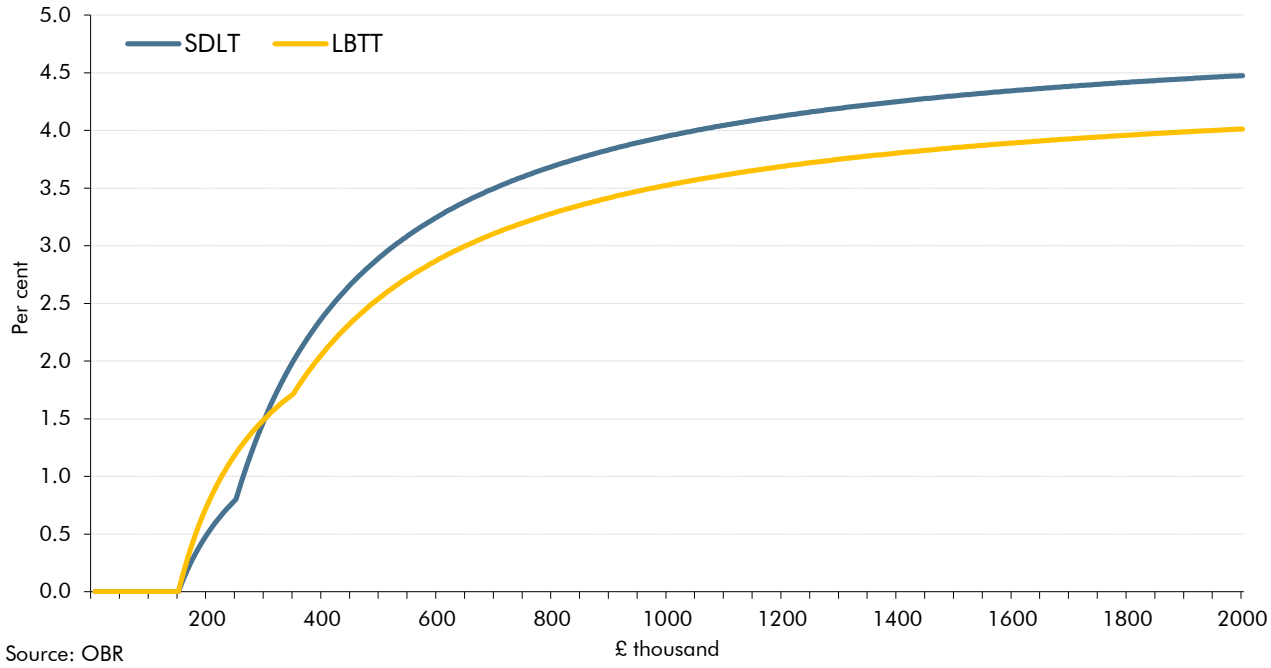
Commercial property

3.7 The 2017-18 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.

3.8 In March 2016, the UK Government announced reforms to commercial SDLT, moving it 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, and a 5 per cent rate thereafter. 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 SDLT in Wales will be replaced with a land transactions tax from April 2018. A bill detailing the new tax was introduced to the National Assembly in September 2016 and is expected to receive Royal Assent by summer 2017. Our forecasts will reflect the new tax when details of tax rates and bands become sufficiently clear.

Methodology

3.10 Our forecasts for LBTT and the share of Welsh SDLT use 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 use a separate model for the ADS and additional properties components, based on recent outturns grown in line with prices and volumes, which are added to the micro-simulation forecast. We assume that Scottish and Welsh prices and transactions grow in line with those for the UK as a whole from 2015-16 onwards. The volatility of commercial property prices and transactions is considerably greater than in the residential market.

3.11 Our Welsh residential SDLT forecast uses base year data from 2015, while for commercial SDLT it uses 2015-16. HMRC does not hold detailed information on the distribution of LBTT payments, so the base year remains SDLT transactions in Scotland in 2013-14, with a number of adjustments applied to account for the significant policy changes since then.

3.12 The distribution of transactions will differ from one year to the next and this may affect how each forecast responds to changes in economic determinants. Since the thresholds for both

LBTT and SDLT 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, and we would expect it to reduce the number of transactions. Since rates on more expensive properties are higher under LBTT than SDLT, the effect of fiscal drag is likely to be asymmetric, with the LBTT forecast responding differently to the SDLT forecast. 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 information.

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 receipts are still below their pre-crisis levels, and their shares of residential and commercial receipts have continued to fall. These declining shares are 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 were 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 SDLT receipts are forecast to increase from £11.4 billion in 2016-17 to £16.8 billion in 2021-22.[1] This strong rise reflects both tax base effects – mainly rising prices – as well as a rising effective tax rate, as those price rises drag a greater proportion of the value of residential transactions into higher tax brackets.

3.17 Compared with November, SDLT receipts in 2016-17 have been revised up by £0.3 billion. Residential transactions and prices have been a little stronger than expected in recent months, but transactions are expected to fall year-on-year in 2016-17 as a whole, partly because of the effect of forestalling in advance of the additional properties surcharge. Transactions at the top of the market have fallen the most (but have also recovered somewhat since our November forecast). These make up an increasing share of receipts across the forecast period due to fiscal drag from fixed thresholds and continued growth in prices. We have revised up receipts from commercial property by small amounts due to slightly stronger in-year receipts that are pushed through to later years.

3.18 Receipts from the 3 per cent surcharge on additional properties (i.e. primarily buy-to-let investments and second homes) that came into effect last April have been revised up in the short term as outturn receipts continue to be higher than expected. They have accounted for around a quarter of receipts from residential property in recent months This rise does not feed through to later years as some of the recent strength appears to reflect the seasonal pattern of the market, which had not been fully factored into the forecast. There is continued uncertainty over the proportion of receipts that will ultimately be refunded (individuals have 36 months to make a claim, so we will not have full outturns for some time). We have retained our November assumption that 15 per cent will be refunded in steady-state, but will keep this under review as more data become available.

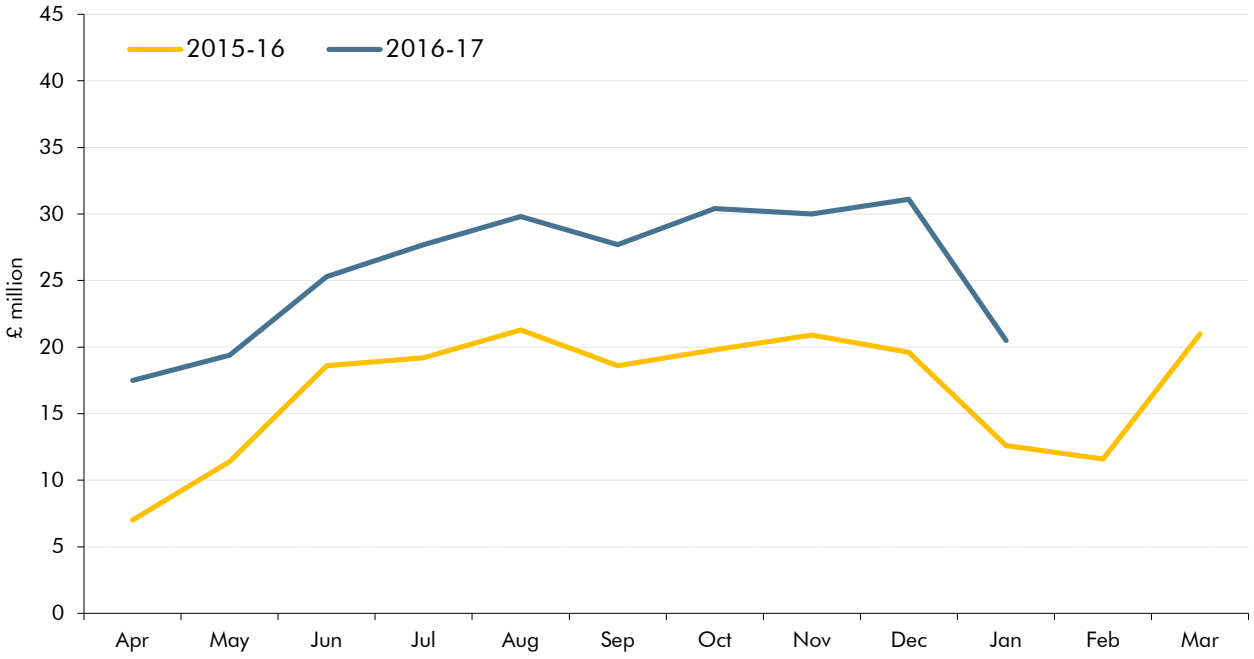
LBTT receipts outturn

3.19 Almost two years of LBTT receipts data have now been published by Revenue Scotland (see Charts 3.4 and 3.5).[2] In 2015-16 total receipts were £416 million and, with two months remaining, 2016-17 outturn is up 20 per cent on the first 10 months of 2015-16 at £407 million, including the new ADS. In 2015-16, receipts were evenly split between residential (£202 million) and commercial (£214 million) transactions. In 2016-17, residential receipts are up sharply, largely due to the ADS raising £77 million (net of refunds to date). Commercial receipts are down 14 per cent on the same period, with the weakness concentrated in the post-referendum summer months. There was also a spike in commercial receipts in December 2015 that was not repeated in December 2016 – this illustrates the volatility of receipts from the commercial sector, which can be skewed by a small number of high-value transactions. We have adjusted our forecasts in light of these trends.

[1] A breakdown of our stamp duty forecast into its component parts – residential (excluding additional properties), additional properties, and commercial – is available in a supplementary fiscal table on our website.
[2] 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. See paragraph 3.32 for the accounting treatment of the forecast and these receipts.

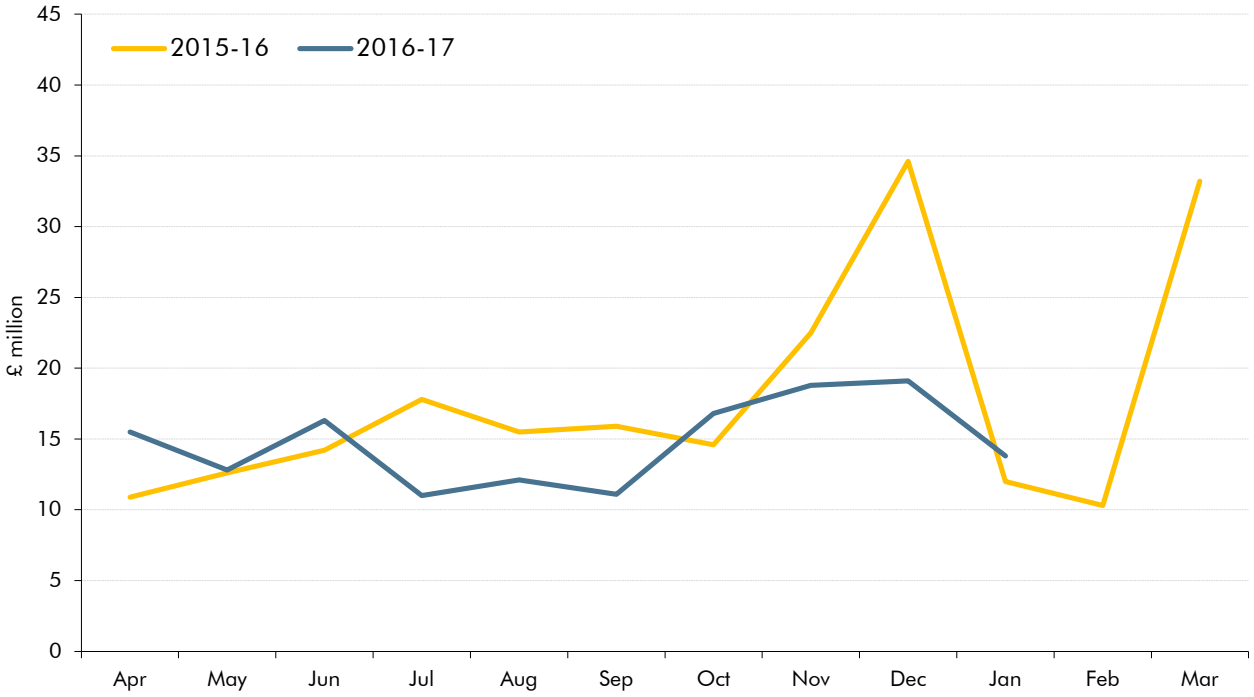
3.20 The residential profile in both 2015-16 and 2016-17 has been distorted by forestalling. A large number of high-value residential transactions were brought forward before the April 2015 introduction of LBTT. This boosted SDLT receipts in March 2015 at the expense of LBTT receipts in the following months. The same behaviour was observed at the end of 2015-16, when buyers moved transactions forward to avoid the additional dwellings supplement that took effect in April 2016.

Chart 3.4: Residential LBTT receipts



Source: Revenue Scotland

Chart 3.5: Commercial LBTT receipts

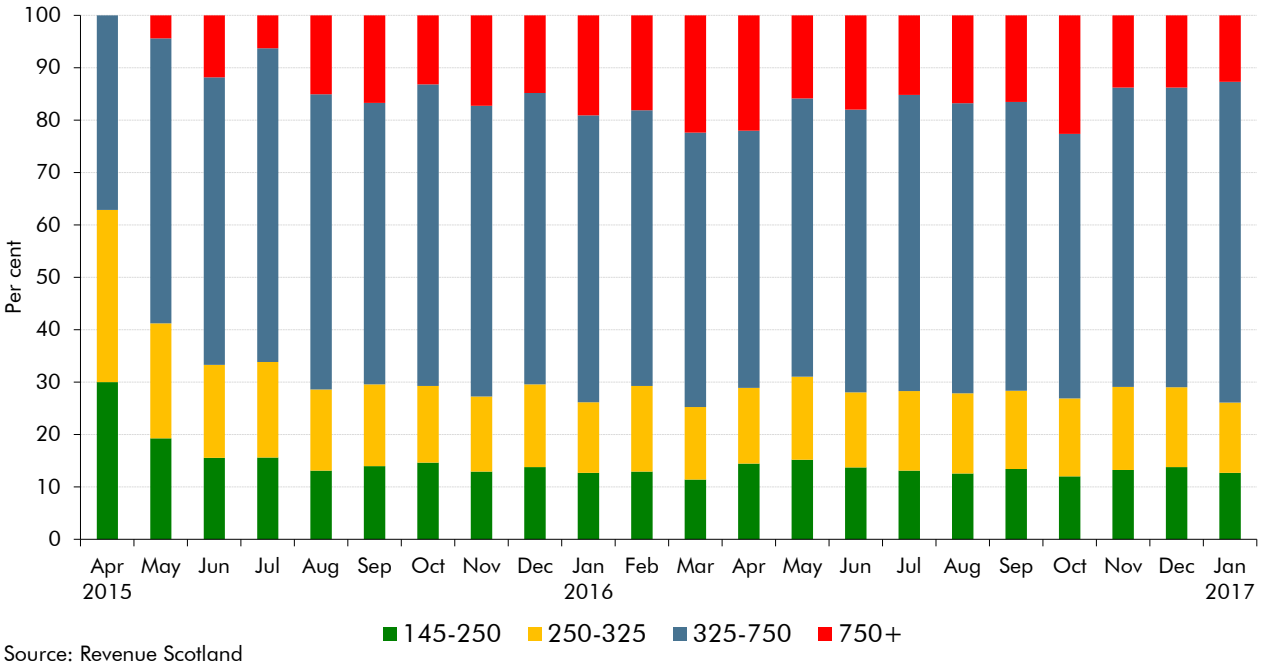


Source: Revenue Scotland

3.21 There may also have been some LBTT forestalling within commercial transactions, although the month-on-month growth is less pronounced. Commercial transactions, both in Scotland and the rest of the UK, tend to cluster at the end of the calendar year and financial year.

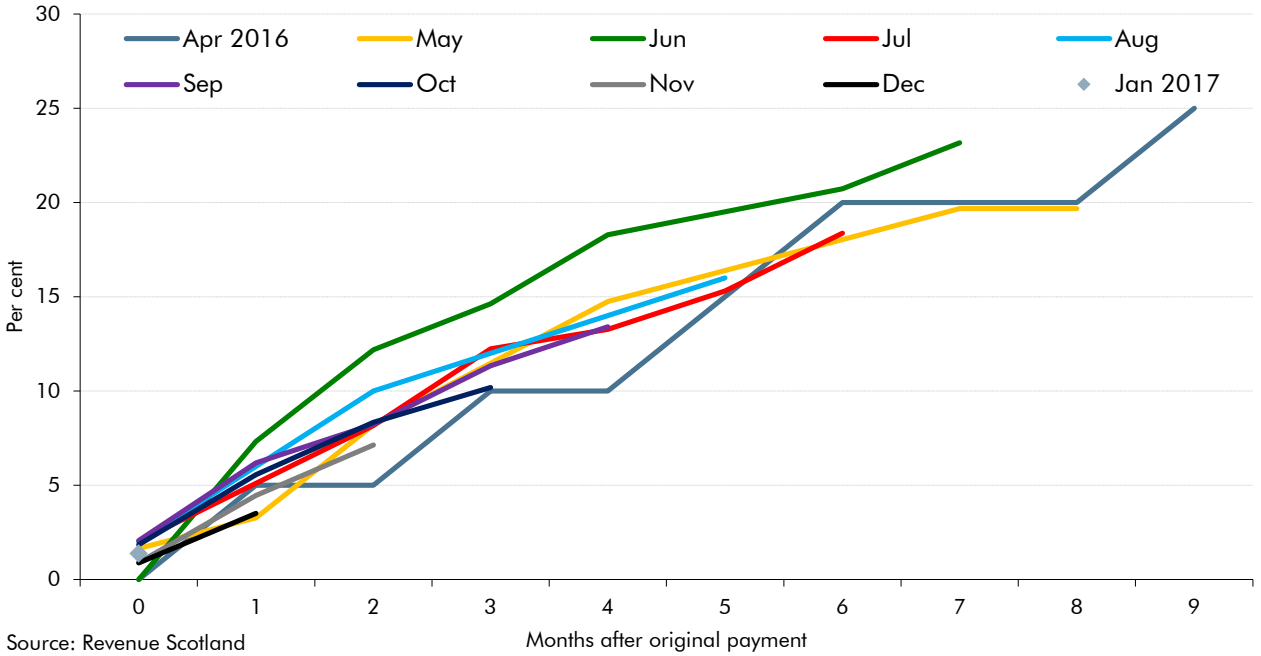
3.22 Revenue Scotland has started publishing more detailed information on the distribution of transactions and receipts across the price distribution. This shows that, except for the period of forestalling, the proportion of receipts from different price bands has been relative constant (Chart 3.6). This information has helped us to quality-assure the outputs of the model that we use to forecast LBTT receipts. Revenue Scotland also publishes cohort specific information on refunds related to ADS payments (where the purchaser temporarily owned an additional property during their move to a new main residence). As well as informing our LBTT forecast, the information in Chart 3.7 has helped us in reaching judgements about the effect of the similar refund system in place in the UK SDLT additional properties regime. We are grateful to Revenue Scotland for publishing this additional information.

Chart 3.6: LBTT residential revenue excluding ADS by price band



Source: Revenue Scotland

Chart 3.7: LBTT ADS refunds by cohort



Source: Revenue Scotland

LBTT forecast

3.23 Table 3.2 shows our latest forecasts for residential and commercial LBTT.[3] The overall forecast is slightly lower in 2016-17, slightly higher in 2017-18 and 2018-19, but then lower from 2019-20 onwards. By 2021-22, we expect receipts to be 88 per cent higher than 2015-16.

3.24 Our residential LBTT forecast – including ADS – is little changed since November, although we have revised down receipts from ADS. The 2016-17 forecast for residential LBTT excluding ADS is higher than in November. Given the progressive rate structure of the residential LBTT regime, price increases lead to a rapid growth in tax revenues, so that residential receipts excluding ADS more than double between 2015-16 and 2021-22. The ADS forecast has been revised down in every year relative to our November forecast. The drivers of these changes are explained below.

3.25 Changes to our commercial LBTT forecast are smaller, with the weaker year-to-date outturns in 2016-17 pushed through the remainder of the forecast. Receipts are expected to rise by an average of 5 per cent a year from 2016-17 to 2021-22.

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							
November forecast	416	483	539	596	657	726	796
March forecast	416	478	553	601	653	715	780
Change	0	-5	14	5	-4	-11	-16
Residential LBTT (excluding ADS)							
November forecast	202	206	235	273	316	366	416
March forecast	202	213	274	311	351	397	447
Change	0	7	39	38	35	31	31
ADS							
November forecast	0	87	105	113	121	130	138
March forecast	0	82	85	88	93	98	103
Change	0	-5	-20	-25	-28	-32	-35
Commercial LBTT							
November forecast	214	190	199	209	219	230	242
March forecast	214	183	193	202	210	220	230
Change	0	-7	-6	-7	-9	-10	-12

3.26 Table 3.3 sets out the changes in our residential LBTT forecast since November. The biggest changes come from the upward revisions to our forecasts for house price inflation and property transactions, reflecting the strength in recent outturns. This is somewhat offset by slightly weaker-than-expected residential ADS receipts in 2016-17. In November we only had limited outturns in relation to ADS, which was grown in line with our price and transactions forecasts. We now adjust our ADS model to account for seasonality in the

[3] In the equivalent table in our November publication residential LBTT included receipts from the ADS. For greater transparency, we now present them separately.

housing market, which we assume is the same for ADS-liable properties. This has reduced the ADS forecast.

3.27 Those affected by the ADS are entitled to reclaim the supplement if the property was purchased to replace their main residence and they sell their previous main residence within 18 months, so it is likely that some of the receipts to-date will be refunded over time. The level and precise timing of such refunds is subject to uncertainty. In the absence of full data, we continue to assume that in steady-state 25 per cent of all revenue will be refunded, which has been split 18 per cent within 12 months of the transaction and 7 per cent in the subsequent six months. This assumption is slightly higher than in our UK SDLT forecast, as Scotland has a relatively smaller private rental sector, so a higher share of transactions are likely to be main residences at risk of claiming a refund. ADS also has a shorter refund window of 18 months versus 36 months in SDLT, which could affect the overall level and the timing of refund claims. The Revenue Scotland cohort-specific refunds data mean that we can keep this assumption under review and refine it as necessary in future forecasts.

Table 3.3: Changes in residential LBTT since November

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	202	293	340	386	437	496	554
March forecast	202	295	359	399	444	495	550
Change	**0**	**2**	**19**	**13**	**7**	**-1**	**-4**
of which:							
Receipts outturn		1	1	1	1	1	1
House prices		0	14	14	14	14	16
Property transactions		5	16	11	8	3	0
Recosting - additional dwellings supplement		-5	-13	-16	-18	-21	-23
Modelling and residual		1	2	2	2	2	2

3.28 Table 3.4 breaks down the downward revision to our commercial LBTT forecast since November. The main factors are weaker-than-expected 2016-17 receipts and lower-than-expected commercial property transactions.

Table 3.4: Changes in commercial LBTT since November

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	214	190	199	209	219	230	242
March forecast	214	183	193	202	210	220	230
Change	**0**	**-7**	**-6**	**-7**	**-9**	**-10**	**-12**
of which:							
Receipts outturn		0	0	-1	-1	-2	-2
Property market determinants		-7	-5	-7	-8	-9	-10
Modelling and residual		0	0	0	0	0	0

Comparison with the latest Scottish Government LBTT forecast

3.29 The Scottish Government published its latest LBTT forecast in December 2016. This included various methodological changes relative to its December 2015 forecast. The latest forecast assumes lower house price inflation (down from around 5 to 1 per cent a year), lower transactions growth (down from around 3 to 1 per cent a year), and has shifted the expected price distribution away from high-value high-yielding transactions in the short term. These changes lead to a much flatter growth profile in the residential LBTT forecast. Previously, the Scottish Government's forecast was higher than ours in the medium term, but it is now lower. Our house price and transactions forecasts for Scotland assume the same growth as in the rest of the UK. In the medium term, we assume house price inflation of around 4½ per cent a year and housing transactions growth of just under 1 per cent a year. The Scottish Government substantially increased its ADS forecast (now broadly in line with ours), but assumes a higher proportion of the initial revenue will be subsequently refunded.

3.30 As well as using different assumptions, our forecasts are produced using different types of model. Our forecast is produced using a micro-simulation model. The Scottish Government uses a model that fits a log-normal distribution to the actual distribution of prices in a given period and projects that forward.

3.31 The Scottish Government's commercial LBTT receipts forecast is higher than ours. Its forecast is based on our November commercial property prices and transactions forecasts. The main reason for the difference is that the Scottish Governments' forecast is based on average outturn over a three-year period, whereas we calibrate our forecast to latest receipts, which have been weaker-than-expected so far in 2016-17. Given the volatile nature of the commercial property market and the dependence of the tax on a small number of high value transactions, this forecast is subject to significant uncertainty and the differences between the Scottish Government's forecast and our own are small relative to the uncertainty around either of them.

3.32 One final difference between our respective forecasts is the accounting treatment. The Scottish Government forecast is based on when the taxable liability occurs (i.e. the completion of a property transaction). Our forecast is based on net receipts, after subtracting refunds and repayments, so that it is consistent with the ONS approach to recording them in the public sector finances data. The two approaches previously produced quite similar results as the lag between liability and payment was quite short. This will change with the introduction of refunds from the 3 per cent supplements – under the Scottish Government's approach the refund will be time-shifted back, but that is not the case under the ONS treatment. The ONS has signalled that it may review the way SDLT receipts are recorded in the public finances. If it decides to record SDLT in accruals rather than cash terms, this distinction would largely disappear.

3.33 The Budget does not contain any UK Government policies that affect the LBTT forecast. There is a measure that changes the profile of SDLT receipts by shortening the length of time taxpayers are allowed between completing their transaction and paying SDLT, but this should not affect LBTT receipts.

Welsh forecast

3.34 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 used the same calendar year 2015 base year that we used in November. We then include the assumed Welsh share of SDLT policy measures in order to produce a final post-measures forecast.

3.35 There are two policies that could affect Welsh SDLT in this Budget. In November 2015 the UK Government announced a reduction in the window during which SDLT liabilities can be paid without penalty from 30 to 14 days. This measure was due to come into effect in 2017-18 but has now been delayed into the next financial year, reducing SDLT receipts by around £100 million in 2017-18 and increasing them by a similar amount in 2018-19. In fiscal terms this is purely a timing effect that will provide a one-off boost to receipts in 2018-19 without any change in total liabilities. Second the new penalty for enablers of tax avoidance is expected to deter some SDLT avoidance, but the effect on SDLT is less than £3 million at the UK level, so we have not included any effect on the Welsh SDLT forecast.

3.36 Table 3.5 shows that we expect Welsh SDLT to increase by 126 per cent between 2015-16 and 2021-22, reaching £343 million in 2021-22. Residential SDLT excluding the additional properties surcharge has been revised up in each year and is £47 million higher in 2021-22. This is partly offset by a large downward revision to our commercial forecast, which reduces the forecast by £21 million in 2021-22.

Table 3.5: Welsh SDLT forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Total SDLT							
November forecast	152	198	221	240	261	289	319
March forecast	152	203	243	263	282	311	343
Change	0	6	22	23	20	22	25
Residential SDLT (excluding additional properties)							
November forecast	82	75	89	101	115	133	156
March forecast	82	96	126	140	154	176	203
Change		21	37	39	39	43	47
Additional properties							
November forecast	0	48	55	58	62	66	69
March forecast	0	44	53	54	57	60	63
Change	0	-4	-2	-4	-5	-6	-6
Commercial SDLT							
November forecast	70	80	81	86	89	95	99
March forecast	70	64	64	69	71	76	78
Change	0	-17	-17	-17	-19	-19	-21

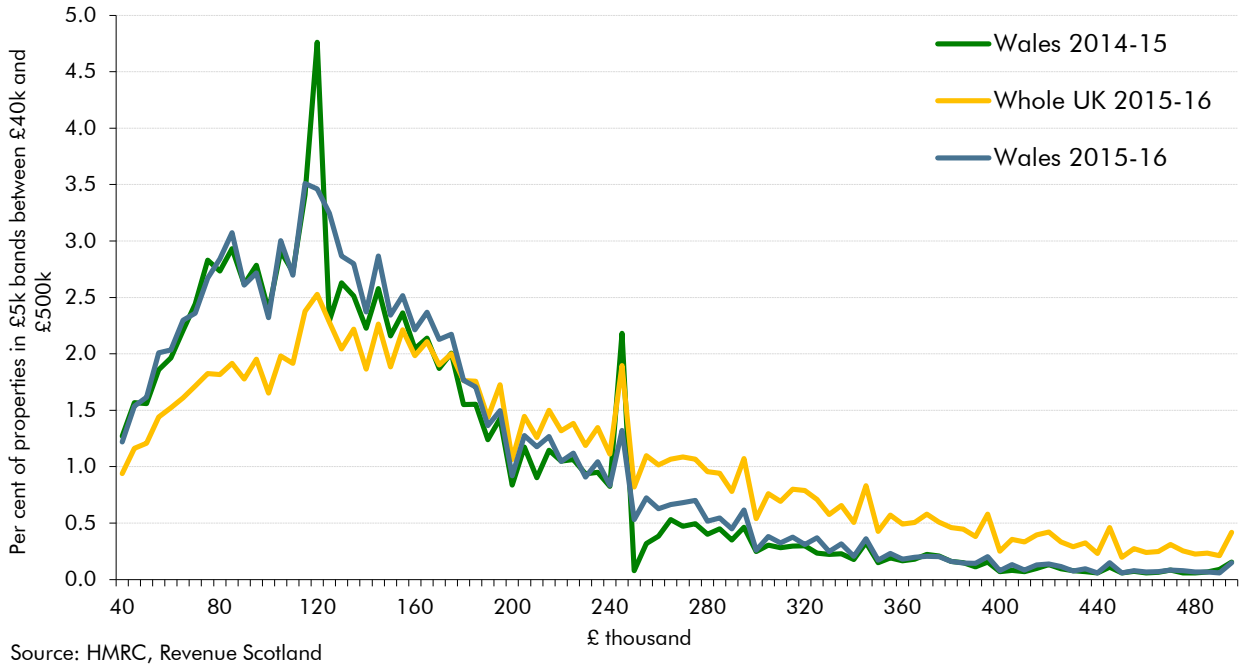
3.37 Table 3.6 shows the increase in our residential forecast is mainly due to higher than expected in-year receipts and, to a lesser extent, increases in our forecasts for house price inflation and property transactions. We have revised down receipts for the additional properties surcharge, in line with the UK SDLT forecast. The modelling changes described above also affect our Welsh SDLT forecast and the effect of the policy measure at this Budget that has a modest impact on residential receipts.

Table 3.6: Changes in Welsh residential SDLT forecast since November

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	82	123	144	159	177	199	225
March forecast	82	140	179	194	211	236	266
Change	**0**	**17**	**35**	**35**	**34**	**37**	**41**
of which:							
Receipts outturn		18	25	27	30	33	37
House prices		1	6	5	5	6	7
Property transactions		2	6	4	3	1	1
Additional properties recosting		-4	-2	-4	-5	-6	-6
Other (modelling, residual and policy)		0	0	3	1	2	2

3.38 Chart 3.6 shows the price distribution of residential sales in Wales in 2015-16 compared to the UK including Scotland, and compared to Wales in 2014-15. The sharp distortions around the tax thresholds under the previous 'slab' regime have been reduced, but 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 forecast implications. First, as these transactions are only taxable if they are subject to the additional properties supplement, the proportion of total SDLT receipts from the supplement is greater in Wales than in the rest of the UK. Second, there is greater potential for fiscal drag in Wales. As the thresholds are fixed in cash terms, price increases will, over time, lead to house purchases that currently pay no SDLT becoming taxable.

Chart 3.8: Distribution of transactions by house price in Wales compared to 2014-15 and 2015-16



Source: HMRC, Revenue Scotland

3.39 Table 3.7 shows the changes in our Welsh commercial SDLT forecast. The largest changes are due to lower than expected in-year receipts. At the time of our previous forecast, Welsh commercial SDLT receipts between April and October were higher than the same period in 2015-16. The three months of outturn since then have been substantially lower than the equivalent months in 2015-16 to the extent that we now forecast receipts to be lower than in 2015-16. Receipts from commercial property transactions are highly volatile and can vary significantly in response to a small number of very high value transactions.

3.40 The delay in implementing the shorter payment window is the only policy that affects the Welsh SDLT forecast at this Budget, but the impact is very small. It moves around £1.5 million of residential SDLT from 2017-18 into 2018-19 and around £0.5 million of commercial SDLT.

Table 3.7: Changes in Welsh commercial SDLT forecast since November

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	70	80	81	86	89	95	99
March forecast	70	64	64	69	71	76	78
Change	**0**	**-17**	**-17**	**-17**	**-19**	**-19**	**-21**
of which:							
Receipts outturn		-15	-16	-17	-17	-18	-19
Property martket determinants		-1	-1	-1	-1	-1	-1
Other (modelling, residual and policy)		0	-1	1	0	0	-1

4 Environmental and transport taxes

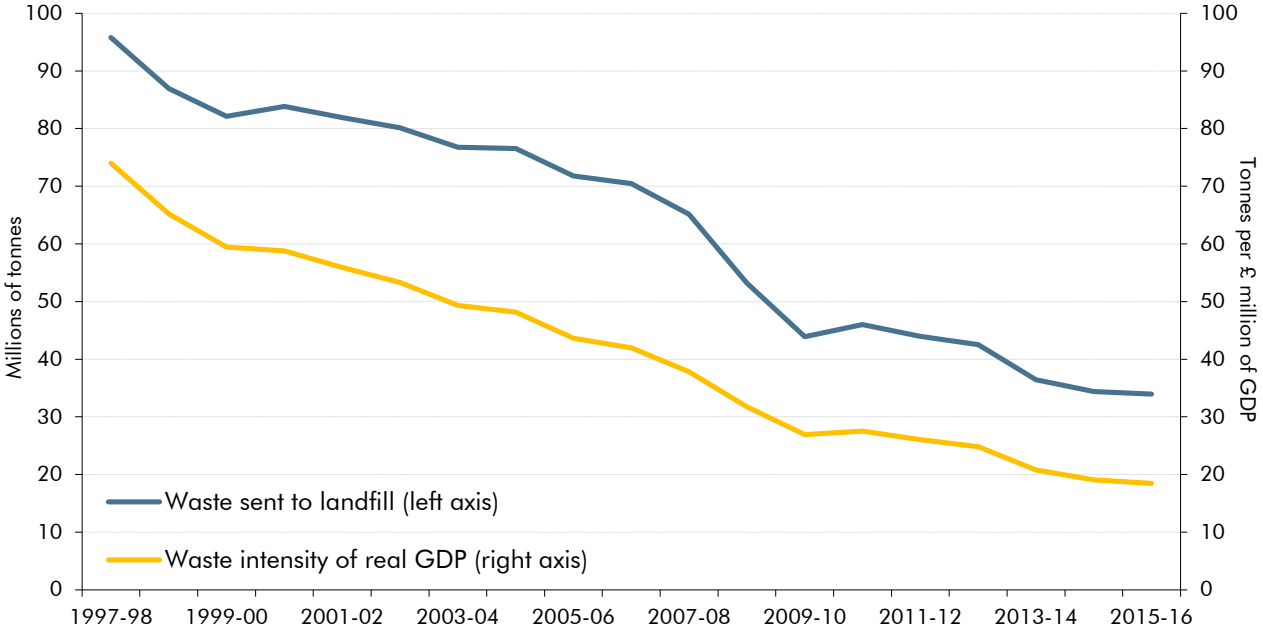
Landfill tax

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

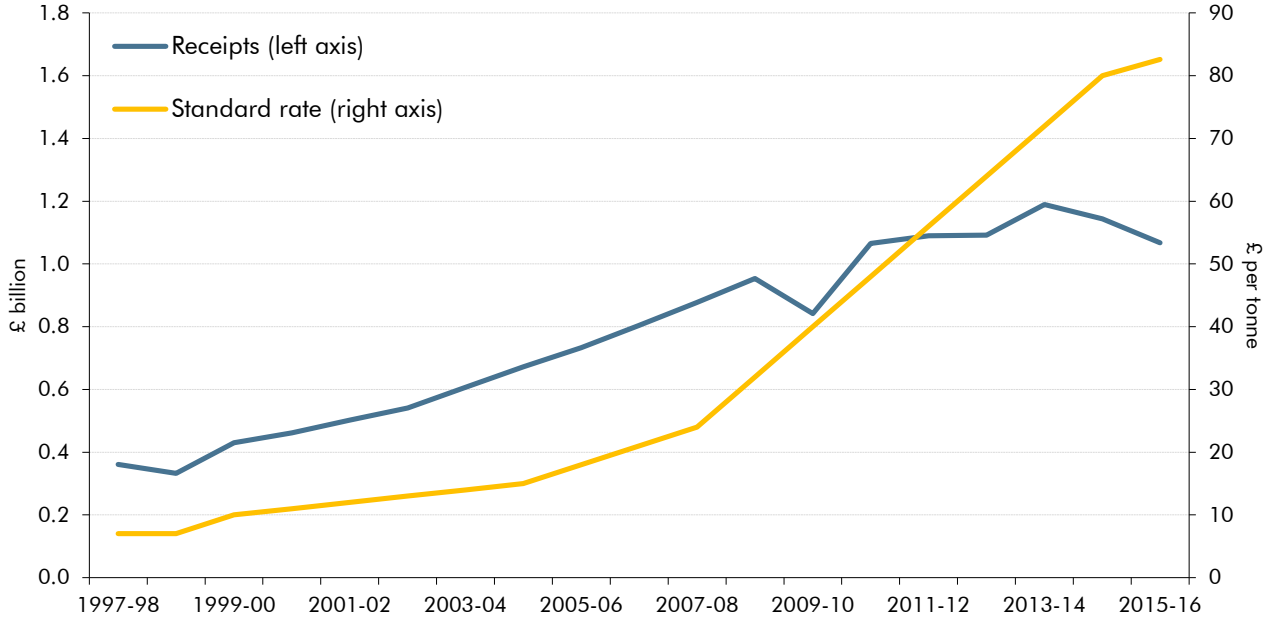


Source: HMRC, Revenue Scotland, ONS, OBR

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, while the tax base has continued to decline. 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 2016 Draft Budget set tax rates for 2017-18 to match those in the rest of the UK. Contributions to the Scottish landfill communities fund are slightly more generous than those for the UK equivalent, but this will have a small effect on the forecast.

Welsh rate

4.5 Landfill tax in Wales will be replaced with a landfill disposals tax from April 2018. A bill detailing the new tax was introduced to the National Assembly in November 2016. It is expected to receive Royal Assent by summer 2017. Our forecasts will reflect the new tax once details about it are 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 landfill tax to the rest of the UK forecast. The Scottish landfill tax forecast also takes into account the latest receipts data from Revenue Scotland.

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

4.9 There are no readily available data on the Welsh share of landfill tax receipts, since landfill operators submit returns that cover sites across England, Wales and Northern Ireland. The Welsh share is calculated using detailed data from Natural Resources Wales, which provide 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 and show a continuous downward trend from 2007-08 onwards at the UK level. The UK total has fallen 32 per cent since 2007-08, with similarly steep falls in both Scotland (42 per cent) and Wales (31 per cent).

Table 4.1: Landfill tonnage in the UK

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

4.12 Table 4.2 shows our latest forecast for landfill tax receipts outside Scotland has been revised down in the early years and up slightly in the later years. Outturn for 2016-17 has been below expectations, particularly in the peak month of January and this weakness is pushed through the forecast. By 2020-21 this is offset by a higher forecast for landfill tonnages. We had previously assumed that household recycling rates would continue to rise as they had from the start of the published series in 2000-01 until 2014-15, reducing landfill waste. Statistics published by DEFRA in December showed that the household recycling rate in England actually fell slightly in 2015-16. We now assume a flat rate for England across the forecast, leading to greater landfill waste relative to our November forecast. Despite this, landfill tax receipts are still forecast to fall each year, reflecting rising capacity of alternative treatments such as incineration.

4.13 There is one measure in this Budget that affects landfill tax receipts. The UK Government has set tighter packaging recycling targets for paper, steel, aluminium and wood, as well as overall recovery and recycling. This is expected to increase packaging recycling and has a small impact on receipts by reducing landfill tonnages in later years. The policy will apply across the UK.

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
November 2016	884	918	799	704	654	623	614
March 2017	884	862	747	680	633	616	606
Difference		-56	-52	-24	-21	-7	-8
of which:							
In-year receipts		-56	-59	-54	-49	-48	-50
Lower recycling trend - forecast assumption		0	8	31	33	46	47
UKG policy - packing recycling tonnages			neg	neg	-5	-5	-5

Scottish landfill tax receipts outturn

4.14 Revenue Scotland has now published six quarters of receipts (monthly data are unavailable). Receipts for the first two quarters of 2016-17 up 4 per cent on the same period last year at

£78 million. Receipts in the rest of the UK fell by 15 per cent year-on-year over the same period. The difference relates to the proportion of landfill waste subject to the standard rate over that period. In Scotland it increased from 41 to 43 per cent while in the rest of the UK it fell from 42 to 36 per cent. Landfill tax receipts are normally evenly spread across each quarter, so we would expect receipts from the first two quarters to provide a reasonable guide of receipts for 2016-17 as a whole.

Scottish forecast

4.15 The forecast for Scottish landfill tax in Table 4.3 is slightly higher than our November forecast. The assumption that receipts in Scotland will follow the same year-on-year path as in the rest of the UK from 2017-18 is subject to risks in both directions. Information produced by the Scottish Government in its December 2016 Draft Budget suggests the pace at which alternative waste infrastructure will come on line could be slower than in the rest of the UK. But recycling rates in Scotland have continued to rise, in contrast to the latest data on England. We have made a small upward adjustment for the former in 2017-18, but assume that the effects of both will be offsetting from 2018-19 onwards. The impact of the UK Government's recycling packaging measure is less than £1 million.

4.16 Our forecast does not make any allowance for the Scottish Government's aspiration to reduce landfill tonnage at a faster pace than in England (consistent with the approach to policy changes set out in paragraphs 1.25-1.27). If the Scottish Government announced policies setting out how reductions in landfill tonnage are to be achieved, backed by evidence that we felt was sufficiently robust, we would factor that into our forecast. For now, faster progress towards the aspiration represents a potential downside risk to this forecast. Previously the Scottish Government had based its forecast on this aspiration. In its December 2016 Draft Budget, it moved to a methodology similar to our own based on landfilled tonnages adjusted for new waste treatment infrastructure. Our receipts forecasts are now relatively close.

Table 4.3: Scottish landfill tax forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	148	154	134	118	110	105	103
March forecast	148	154	149	122	113	110	109
Difference	0	0	15	3	4	6	6

Welsh forecast

4.17 Household recycling rates have continued to rise in Wales so we have not applied the downward adjustment used for the rest of the UK. This means our Welsh landfill tax forecast, shown in Table 4.4, falls more rapidly than our UK landfill tax forecast.

4.18 In November we made a large revision to the starting point of this forecast by assuming a lower Welsh share of UK landfill tax receipts. This was based on analysis we received from the Welsh Government using data held by Natural Resources Wales for 2015-16. This

showed a faster decline in waste taken to landfill in Wales than in the rest of the UK (in part due to a new waste incinerator near Cardiff coming online). Based on the classifications used by Natural Resources Wales the landfilled waste was also less likely to pay at the standard rate.[1] This reflected additional waste infrastructure leading to less local authority waste being sent to landfill. We have assumed that growth continues to follows our November profile. This means that the share of Welsh landfill tax revenue decreases slightly from around 3.8 to 3.6 per cent over the forecast period.

4.19 The Welsh Government also aspires to reduce landfill tonnage at a faster pace than in England. Again, pending firm policies backed by sufficiently robust evidence, that aspiration 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
November forecast	34	35	30	27	25	24	23
March forecast	34	33	28	25	23	22	22
Difference	0	-2	-2	-2	-2	-1	-1

Aggregates levy

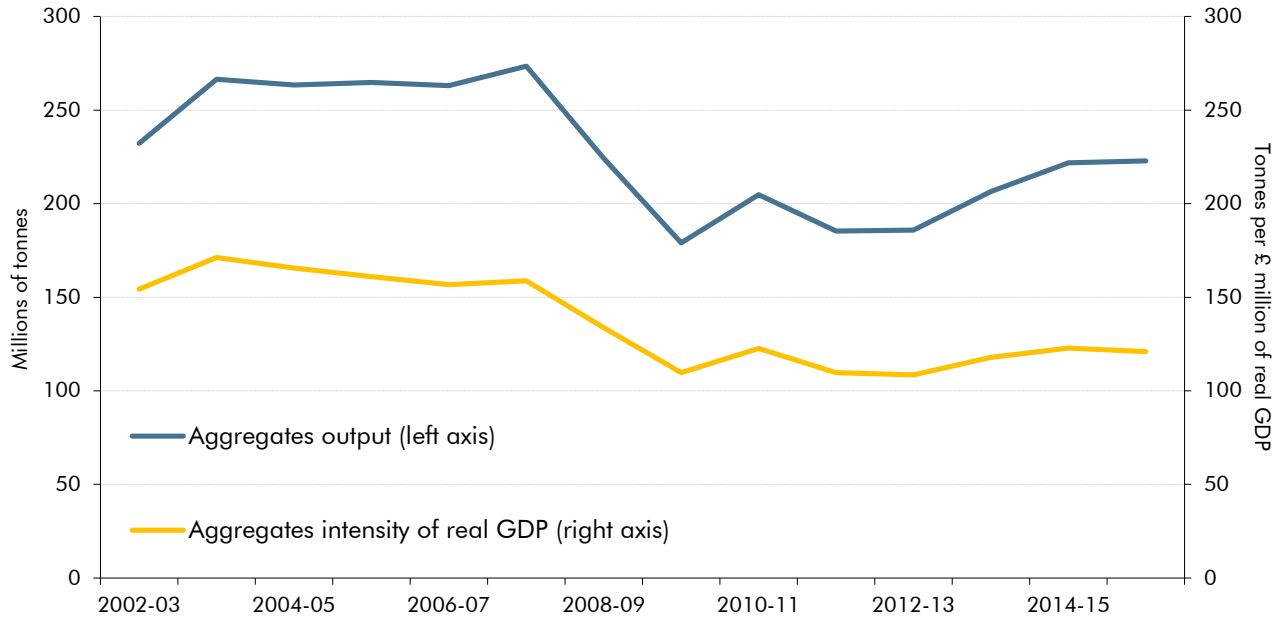
Trends in UK aggregates levy receipts

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, while the levy rate is subject to policy risk.

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 since then.

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

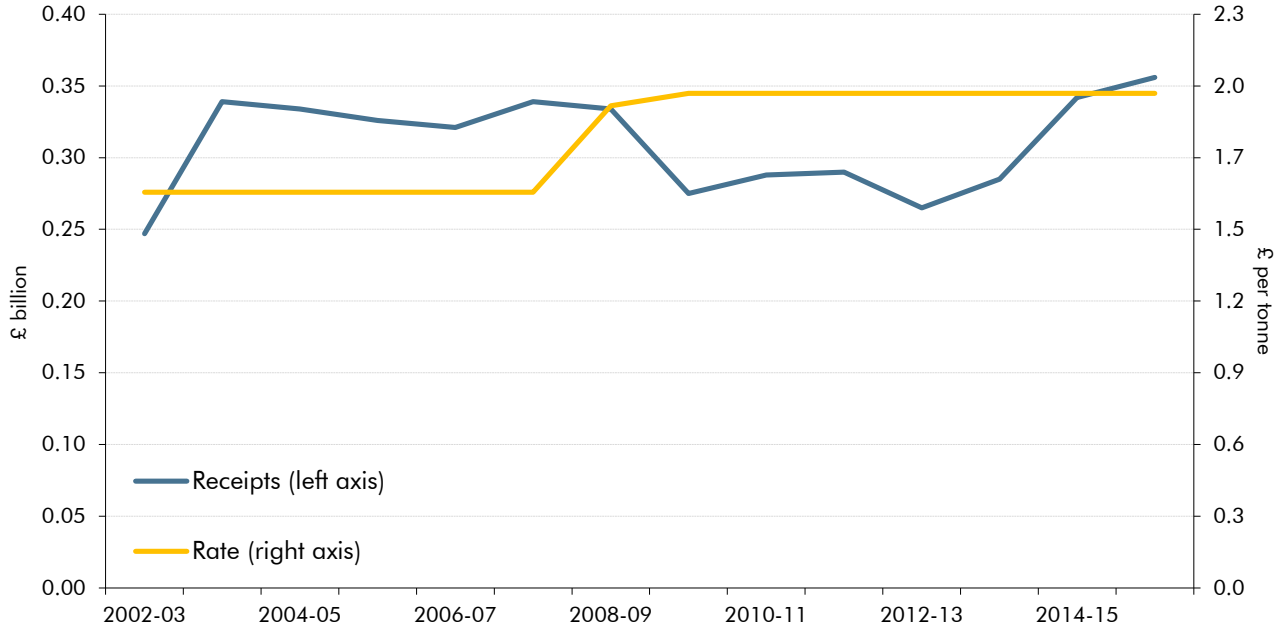
Chart 4.3: UK aggregates output relative to economic activity



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. While the UK Government's stated 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 15 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

4.23 The Government has legislated to devolve the aggregates levy to Scotland. This will come into effect once legal challenges affecting the levy are resolved. It has also committed to keeping devolution of the aggregates levy to Wales under review. 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 GDP, 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 uprated by RPI inflation, consistent with the UK Government's default uprating assumption. As noted, this represents a source of policy risk since the rate has been frozen for one year every year since 2009-10.

4.25 The Scottish and Welsh shares of aggregates levy are not directly available, 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 United Kingdom Minerals Yearbook (set out in Table 4.5). Aggregates tonnage across the UK has fallen 27 per cent since 2007-08, with the decline significantly greater in Scotland (41 per cent) and Wales (38 per cent). The Scottish share has declined sharply since 2012-13, while the Welsh share has picked up since then.

4.26 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 the '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 4.5: 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

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

UK forecast

4.28 Table 4.6 shows that we have revised up our UK forecast significantly since November to reflect the higher-than-expected outturn so far in 2016-17, an upward revision to expected aggregate tonnages and some modelling changes.

4.29 In this Budget, the rate for 2017-18 has again been set at £2 per tonne. This is the eighth consecutive year that the rate has been frozen. The cost of the latest freeze is £15 million a year. As we noted in our March 2015 *EFO*, our forecast assumes a numbers of excise and environmental duties are indexed in line with default parameters that are detailed by the UK Government at each Budget in the Treasury's *Policy costings document*. For many of these duties this Government and its predecessor have chosen not to impose its stated policy and this is a continued risk to our forecast. If the aggregates levy rate had increased by RPI inflation each year since 2010-11 then the rate would now be around £2.25 per tonne. Our higher RPI inflation forecast means that the cost of freezing the rate at this Budget is higher than the £5 million a year cost of last year's freeze.

Table 4.6: UK aggregates levy forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	351	365	346	367	362	365	370
March forecast	351	369	351	375	370	374	380
Difference	0	4	5	8	8	9	10
of which							
Pre-measures forecast	0	4	18	23	24	25	26
Rate freeze			-14	-15	-16	-15	-15

Scottish forecast

4.30 Table 4.5 showed that the Scottish share of UK aggregates tonnage is relatively high, although it has recently fallen to below 15 per cent of the UK total. It reached 14.5 per cent in 2014-15 and, since we assume it remains constant at that level, our Scottish forecast moves in line with the UK forecast.

Table 4.7: Scottish aggregates levy forecast

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

Welsh forecast

4.31 The Welsh forecast also follows that for the UK, so there is a very slight increase relative to our November forecast.

Table 4.8: Welsh aggregates levy forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	34	35	33	35	35	35	35
March forecast	34	35	33	36	35	36	36
Difference	0	0	0	1	1	1	1

Air passenger duty

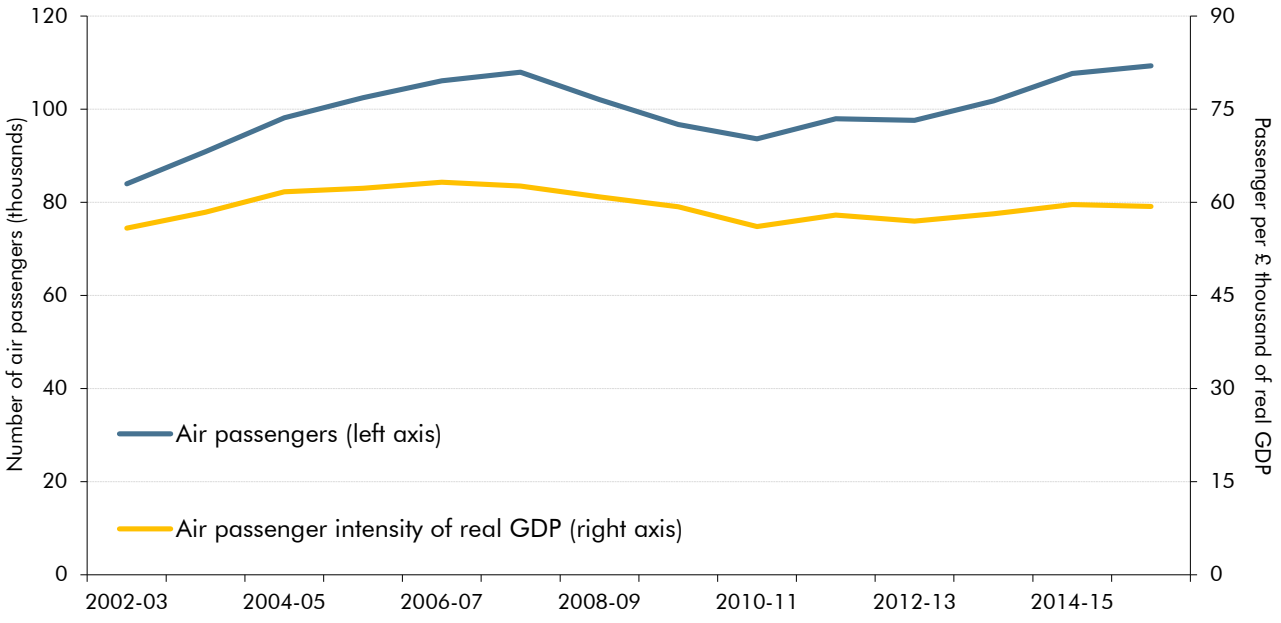
4.32 As set out in Chapter 1, the Scotland Act 2016 includes provisions for the devolution of air passenger duty (APD) to Scotland in April 2018.

Trends in UK air passenger duty

4.33 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.

4.34 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 and real GDP.

Chart 4.5: UK passenger numbers relative to economic activity



Source: HMRC, ONS, OBR

4.35 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. The table 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 GERS publication. This 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

4.36 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. As we set out in Chapter 1, when details of any changes become sufficiently clear we will reflect them in our forecast.

4.37 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

4.38 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

policy is to uprate APD rates in line with the RPI. We include a separate adjustment in the model to allow for the upward trend in the share of passengers using low-cost operators.

4.39 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 share is assumed to remain constant across the forecast.

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

UK and Scotland forecasts

4.41 Table 4.10 sets out our APD forecast for the UK, which we have revised up since November. An upward revision to our RPI inflation forecast leads to higher tax rates, but slightly weaker real GDP growth towards the end of the forecast partly offsets that. Our methodology means the Scottish forecast moves in line with the UK forecast, with both rising by 28 per cent between 2016-17 and 2021-22, as shown in Table 4.11.

4.42 There are no policy measures in this Budget that affect APD.

Table 4.10: UK air passenger duty forecast

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	3039	3228	3350	3487	3653	3842	4037
March forecast	3039	3219	3373	3499	3651	3833	4026
Difference	0	-9	23	12	-2	-10	-11

Table 4.11: Scottish air passenger duty forecasts

	£ million						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
November forecast	284	302	313	326	342	360	378
March forecast	284	301	316	327	342	359	377
Difference	0	-1	2	1	0	-1	-1