

Office for  
**Budget  
Responsibility**

## **Forecasting Scottish taxes**

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March 2012

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# Introduction

The Office for Budget Responsibility (OBR) was created in 2010 to provide independent and authoritative analysis of the UK's public finances. Twice a year, at the Budget and in the autumn, we produce forecasts for the UK economy and the public finances, which we publish in our *Economic and fiscal outlook* (EFO) publication. In addition, the Government has now asked us to forecast Scottish receipts from a number of taxes, which the Government intends to devolve to the Scottish Parliament from April 2015 onwards.

This request arises from the Scotland Bill, which was introduced in Parliament in November 2010 and is expected to receive Royal Assent in Spring 2012. The Command Paper 'Strengthening Scotland's Future', published alongside the Bill, included proposals to fully devolve stamp duty land tax and landfill tax to Scotland and devolve 10p from each band of income tax in order to increase the financial accountability of the Scottish Parliament. The Command Paper also committed to devolve aggregates levy following the resolution of an ongoing court case.

In agreement with the OBR, the Command Paper sets out the role of the Office in providing forecasts of Scottish income tax, landfill tax, stamp duty land tax and aggregates levy receipts from April 2012. The Chancellor will also send these forecasts to the First Minister of Scotland in an open letter. We will publish our forecasts for these taxes alongside each EFO, consistent with the main UK forecast it contains.

The purpose of this methodology note is to describe how we plan to forecast these Scottish tax receipts. This reflects our determination to make our forecasts and methods as transparent as possible. It also supports the desire in 'Strengthening Scotland's Future' that the new system, and the processes of these reforms, should be transparent and available for scrutiny.

We have worked closely with analysts at HM Revenue and Customs (HMRC) in developing these methodologies. We have also discussed the approach with officials from HM Treasury and the Scottish Government. The methodology and the forecasts that will be published alongside the Budget represent the collective view of the three independent members of the OBR's Budget Responsibility Committee (BRC). The Committee takes full responsibility for the judgments that underpin the methodology and the final forecasts.

We consider these methodologies work-in-progress. The OBR's role in forecasting is starting three years ahead of the initial devolution of the taxes, which will allow us to develop and improve forecasts in the light of experience and the availability of new information sources. The methodologies implicitly assume unchanged policy in both the UK and Scotland. We will work with the Scottish Government to develop forecasting methodologies in light of changes that Scotland may make in the tax regime following the devolution of these taxes.

# 1 The OBR's role in forecasting Scottish taxes

## Scotland Bill

- 1.1 The Scotland Bill was introduced in Parliament in November 2010. The Command Paper 'Strengthening Scotland's Future'<sup>1</sup>, published alongside the Bill, included proposals to devolve tax-raising powers to Scotland and to increase the financial accountability of the Scottish Parliament. The Scotland Bill implements many of the recommendations of the Commission on Scottish Devolution (the Calman Commission).
- 1.2 As of March 2012, the Scotland Bill is currently being considered in the UK and Scottish Parliaments.

## Proposals

- 1.3 The key financial proposals of the Scotland Bill are:
  - a Scottish rate of income tax to replace part of the UK income tax;
  - the full devolution of stamp duty land tax and landfill tax;
  - the power to create or devolve other taxes to the Scottish Parliament; and
  - new borrowing powers and a Scottish cash reserve to manage fluctuations in devolved tax revenues.

## Scottish rate of Income Tax

- 1.4 The existing basic, higher and additional rates of income taxes levied by the UK government would be reduced by 10 pence in the pound for those individuals defined as Scottish taxpayers. The Scottish Parliament will then levy a new Scottish rate of income tax, which will apply equally to all of the main UK rates. The new Scottish income tax rate will need to be set every year by the Scottish Parliament.

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<sup>1</sup> [http://www.scotlandoffice.gov.uk/scotlandoffice/files/Scotland\\_Bill\\_Command\\_Paper.pdf](http://www.scotlandoffice.gov.uk/scotlandoffice/files/Scotland_Bill_Command_Paper.pdf)

The block grant from the UK government to Scotland will then be reduced to reflect the fiscal impact of the devolution of these tax-raising powers.

- 1.5 The Scottish rate of income tax will be paid by Scottish taxpayers, where a Scottish taxpayer is defined as a UK taxpayer either resident in Scotland or whose closest connection is with Scotland. The Command Paper argued that identifying Scottish savings and dividend income would be 'onerous, complex and costly', so the Scottish tax rate will be applied primarily to earned income. The UK government will continue to be responsible for decisions on thresholds and the scope of income tax. The Scottish Government will have responsibility only for the rate of Scottish income tax.
- 1.6 The Scottish income tax will be introduced in April 2016, at which point the main UK rates will be reduced by 10p for those defined as Scottish taxpayers.
- 1.7 During a transitional period which the UK Government anticipates would be a period of two or three years, the deduction in the block grant would be calculated annually. The forecast level of receipts resulting from whatever rate of Scottish income tax the Scottish Parliament levies will be paid to the Scottish Government with no subsequent reconciliation to the actual tax revenues raised. During this period, the Scottish Budget would not be exposed to errors in the forecast for Scottish income tax. If the Scottish Parliament levied a Scottish rate of income tax of 10p, leaving income tax rates in Scotland the same as in the rest of the UK, then it would be no better or worse off.
- 1.8 After this transitional period, the permanent reduction in the block grant corresponding to the new income tax power would be calculated. The Command Paper notes that this 'will be based on both outturn tax receipt data and forecasts by the independent OBR'. The eventual decision on the method for adjusting the block grant will be a matter for the UK and Scottish governments and not for the OBR. After this point, Scotland would also be exposed to errors in the forecast. The Bill provides Scotland with some borrowing powers to manage this.
- 1.9 Once there has been a permanent reduction in the block grant, a decision by the UK government to change the income tax structure and allowances would affect Scottish income tax receipts. The UK government would adopt a principle of 'no detriment', which means that any policy changes to the UK income tax structure that affect the Scottish Budget would need to be compensated by an appropriate adjustment to the block grant. The OBR will have a role in forecasting the impact of UK decisions on Scottish income tax receipts.

## Devolution of Stamp Duty Land Tax and Landfill Tax

- 1.10 The Scotland Bill provides for both stamp duty land tax and landfill tax to be entirely devolved to Scotland. The two taxes will cease to apply in Scotland and the Scottish Parliament will be able to levy its own taxes in respect of land transactions and disposals of waste to landfill. The intention is to devolve these taxes from April 2015, so that the UK-wide versions of these taxes would be switched off in Scotland from that date.
- 1.11 The devolution of tax-raising powers for these two taxes will be associated with a corresponding reduction in the block grant. In contrast to Scottish income tax, the complete devolution of these taxes would mean that changes to the tax regime in the rest of the UK would not have an effect on the Scottish system, so there would be no need for further adjustments to the block grant to compensate for changes in the rest of the UK.
- 1.12 The Calman Commission also recommended the devolution of the aggregates levy to the Scottish Parliament. However, the aggregates levy is currently subject to legal challenge in the European Courts and the Command Paper states that 'the UK Government does not consider it appropriate to devolve the levy at this time. The intention is to keep the devolution of this levy under review and subject to European Court decisions, devolve this tax to the Scottish Parliament in the future'.
- 1.13 In the interim, the UK Government will assign receipts from the aggregates levy as it relates to Scotland to the Scottish Government. The estimated revenue will be allocated to the Scottish government, with the equivalent amount deducted from the Scottish Government's block grant each year. This would not have any financial impact on the Scottish Government's block grant, but it would illustrate the amount of revenues that would be attributable to a Scottish aggregates levy if it was to be devolved.

## Power to create or devolve other taxes

- 1.14 The Scottish Parliament will be given a power to legislate, with the agreement of the UK Parliament, to introduce specified new taxes that apply across Scotland. The UK Government would assess any Scottish proposal for a new tax against a number of criteria. In particular, whether the proposed tax would impose a disproportionate negative impact on UK macroeconomic policy or impede the single UK market.

## Borrowing Powers and Scottish cash reserve

- 1.15 The Scotland Bill gives Scotland new borrowing powers to finance both current and capital expenditure and to establish a Scottish cash reserve. In particular the Bill allows:
- the Scottish Government to borrow up to £200 million for current expenditure in any one year to help manage forecast errors. The maximum outstanding stock of such borrowing would be £500 million. This could be used to cover temporary mismatches between tax and spending during a year or if the outturn for devolved taxes is less than forecast. Such borrowing would be from the National Loans Fund;
  - the Scottish Government to borrow up to 10 per cent of the Scottish capital budget in any year to fund capital expenditure. In 2014-15, this would be approximately £230 million. The overall stock of capital borrowing would be capped at £2.2 billion. As with borrowing for current expenditure, this would be from the National Loans Fund or commercial sources. The Government is expected to consult shortly on the issue of Scottish bond issuance; and
  - a Scottish cash reserve to be set up to help provide flexibility to offset forecast errors. If outturn tax revenues are higher than forecast these could be used to build up a cash reserve. Ahead of the new system going live, the Scottish Government is allowed to save up to £125 million to act as a buffer if forecast errors occur in the first years of the system.
- 1.16 Scottish borrowing could affect UK-wide government borrowing. The OBR will have to judge the impact of such borrowing on the UK-wide fiscal aggregates at each Budget and Autumn Statement, as it does for borrowing by local authorities and public corporations.

## Role of the OBR

- 1.17 'Strengthening Scotland's Future' tasks the OBR with providing forecasts of Scottish income tax, landfill tax, stamp duty land tax and aggregates levy from April 2012. At this stage, HM Treasury will notionally assign these forecast receipts to the Scottish Budget to show how much of what is currently grant funding would be replaced by tax, although the Scottish Budget would not vary until the devolution of these taxes takes place. The Chancellor will also send these forecasts to the First Minister of Scotland in an open letter.
- 1.18 We will publish our forecasts for these taxes alongside each EFO, consistent with the main UK forecast.

- 1.19 The OBR's forecasts will have a number of roles in the new system of Scottish finance:
- in helping to determine the size of adjustment to Scotland's block grant;
  - in providing estimates to ensure that the Scottish budget suffers 'no detriment' from changes in the UK income tax structure and allowances; and
  - ensuring that Scottish income tax receipts are managed within each fiscal year.
- 1.20 As noted earlier, the OBR forecasts, along with outturn receipts data, will be used to calculate the adjustments to the block grant to reflect Scottish tax powers. The eventual calculation is a matter to be agreed by the UK and Scottish governments, not for the OBR. During the transitional period after the devolution of Scottish income tax, the deduction from the block grant will be calculated annually. This will reflect the OBR forecast for Scottish income tax, but there will be no subsequent reconciliation to outturn receipts.
- 1.21 Changes to the scope and thresholds of the income tax system remain the responsibility of the UK government and would affect the level of Scottish income tax receipts. In line with the principle of 'no detriment', any policy changes to the income tax structure that affect the Scottish Budget would have to be compensated by an appropriate adjustment to the block grant. The Command Paper notes that 'such adjustments will be based on OBR estimates of the impact of changes to the income tax system to the Scottish Budget and will be transparent, published and open to scrutiny or audit by external parties'.
- 1.22 The Command Paper has proposed a method of managing the in-year risk from the monthly volatility of income tax receipts. The variability of these receipts is most apparent with self-assessment receipts which are primarily collected at the end of January and July. In addition, some income tax, particularly self-assessment, is not received until well into the next financial year. To mitigate this risk, the UK Government will make payments, when they are required, to the Scottish Budget corresponding to a forecast of Scottish income tax receipts. Estimated revenues, alongside the block grant, would be drawn down over the course of the year as and when they are needed rather than when actual tax receipts are received. The Command Paper notes that 'the forecast upon which these payments will be based will be made by the OBR'. Subsequently there would be a reconciliation between the outturn receipts and the forecast with corresponding transfers between the Scottish Budget and the UK Consolidated Fund.



## 2 Forecasting Scottish taxes

### Overview

- 2.1 A detailed explanation of the OBR's approach to producing the UK economic and fiscal forecast is set out in two briefing papers: *Forecasting the public finances* and *Forecasting the economy*, available on our website.
- 2.2 The UK macroeconomic forecast is produced by OBR staff on the basis of assumptions and judgements decided by the OBR's independent Budget Responsibility Committee (BRC). The macroeconomic forecast generates the large set of detailed economic determinants that are needed to forecast the public finances.
- 2.3 To produce the UK public finances forecast we then work closely with analysts in government departments that are responsible for using these determinants to produce forecasts of the many different revenues, spending streams and financial transactions that affect the public finances. The OBR staff and the BRC scrutinise and challenge the fiscal forecasts that these departments produce, and the fiscal forecasting methodologies, assumptions and judgements used are decided by the BRC. OBR staff then compile these forecasts together to produce the aggregate public finances forecast.
- 2.4 To consider the appropriate methodology for forecasting Scottish taxes we have worked closely with analysts at HM Revenue and Customs (HMRC). We have also discussed the approach with officials from HM Treasury and the Scottish Government. The forecasts will be produced by analysts at HMRC. The OBR staff and BRC will scrutinise and challenge the forecasts produced, and will have the final say on all judgements and assumptions used.
- 2.5 In this way the methodology and the forecasts that will be published alongside the Budget will represent the collective independent view of the BRC. As with the UK forecasts, the BRC will take full responsibility for the judgments that underpin the methodology and the final forecasts. We intend to be fully transparent in setting out the methodology, data and assumptions that we have used.
- 2.6 It is not possible to directly replicate the methodology we use to produce the UK forecasts. In particular the macroeconomic data that we would need to produce a Scottish macroeconomic forecast and economic determinants is generally not available at a Scottish level or is only available with a long lag. Some high-level

breakdowns of Scottish GDP by expenditure, output and income have been produced but only on an experimental basis and not to the level of detail that we would need.

- 2.7 For example, the economic determinants required to produce the UK income tax forecast such as wages and salaries and mixed income (for self-employment income) are not currently available for Scotland in the experimental National Accounts.
- 2.8 We are therefore not able to produce a Scottish macroeconomic forecast to drive the Scottish tax forecast. Instead the methodologies we intend to use, described in more detail in the remainder of this chapter, are generally based on Scotland's historic share of the relevant UK tax stream. We then generally assume that this share will be maintained at the recent average level in the future. So the Scottish tax forecast is derived by applying the Scottish share to our projection of the UK tax base. With Scotland and the UK subject to the same fiscal and monetary policy regime and external factors, many of the key economic indicators such as GDP growth and the labour market usually follow a broadly similar path over time.
- 2.9 We will consider the case for making ad-hoc adjustments if there is robust evidence of specific factors which may affect the Scottish share of the tax in the future, for example if a newly announced policy can be expected to have a disproportionate impact on the Scottish share.
- 2.10 As set out in the *Introduction*, we consider these methodologies work-in-progress. They will be developed and improved over time in the light of experience and availability of new information sources.

## Scottish Income Tax

### Data on Scottish Income Tax

- 2.11 In the run up to the devolution of Scottish income tax, HMRC will identify each individual taxpayer as Scottish or not and flag them appropriately on their PAYE and SA administrative systems. Once this has been done, it will be possible to determine the Scottish share of UK income tax with a high level of precision.
- 2.12 In the meantime, the main source of information on the Scottish share of income tax is the Survey of Personal Incomes (SPI), an annual HMRC survey based on a sample of 600,000 individuals drawn from their PAYE, SA and Claims systems. The SPI is available only with a long time lag with the 2009-10 SPI released on 29 February 2012. Problems with a new PAYE administrative system and a major re-engineering of SPI processes have meant that the 2009-10 survey was delayed

and no data on 2008-09 is yet available. The SPI is expected to return to its usual publication timetable in future years, but will only be published around 20 months after the end of the tax year (i.e. the SPI 2010-11 survey is scheduled for publication in December 2012).

## Definition of Scottish income tax

- 2.13 The Scottish rate will be levied on non-savings, non-dividend income (i.e. earnings from employment, self-employment, pension income, taxable benefits and income from property). The income tax liabilities would consist of all PAYE liabilities and SA liabilities on non-savings, non-dividend income. Tax liabilities for a particular year would include both PAYE (largely paid in the same year as the activity which created the tax liability) and SA (which is usually paid in the year after the activity that took place to create the tax liability).

## Scottish share of income tax receipts

- 2.14 Table 2.1 shows SPI-based estimates of the Scottish share of UK income tax from 1999-2000 to 2009-10, assuming a 10p Scottish rate levied on the then starting, basic and higher rates. Income tax liabilities are estimated using HMRC's Personal Tax Model (PTM), a microsimulation model of the UK income tax system, using SPI datasets.

Table 2.1: SPI-based estimates of Scottish Income Tax

	Scottish Income Tax Liabilities from Scottish rate (£m)	Proportion of UK income tax liabilities	Proportion of UK non-savings, non-dividend liabilities
1999-00	2600	2.84	3.04
2000-01	2970	2.87	3.03
2001-02	3120	2.97	3.14
2002-03	3210	3.01	3.15
2003-04	3310	3.07	3.23
2004-05	3570	2.98	3.15
2005-06	3930	2.93	3.13
2006-07	4260	2.93	3.15
2007-08	4570	2.89	3.14
2008-09	n/a	n/a	n/a
2009-10	4390	2.95	3.16

- 2.15 Table 2.1 indicates that the Scottish share is more stable as a proportion of non-savings, non-dividend income than as a proportion of total income tax liabilities. This is likely to reflect the fact that savings and dividend income are more volatile than earned income. For example, savings income has dropped off very sharply in recent years as the Bank of England base rate fell to a record low following the financial crisis. The Scottish share of non-savings, non-dividend income has been

very stable. In seven out of the ten years it lay within a narrow range of 3.13 per cent to 3.16 per cent <sup>1</sup>.

2.16 The Scottish share of income tax can be divided into:

- the Scottish resident tax share i.e. the overall tax liabilities on non-savings, non-dividend income of Scottish resident taxpayers as a proportion of the total for all UK taxpayers; and
- the Calman wedge - for Scottish resident taxpayers, this is the share of their overall tax liabilities on non-savings, non-dividend income that is attributable to the 10p portion that the Scottish government has the power to vary.

Table 2.2: Decomposition of the Scottish share of income tax (non-savings, non-dividend liabilities)

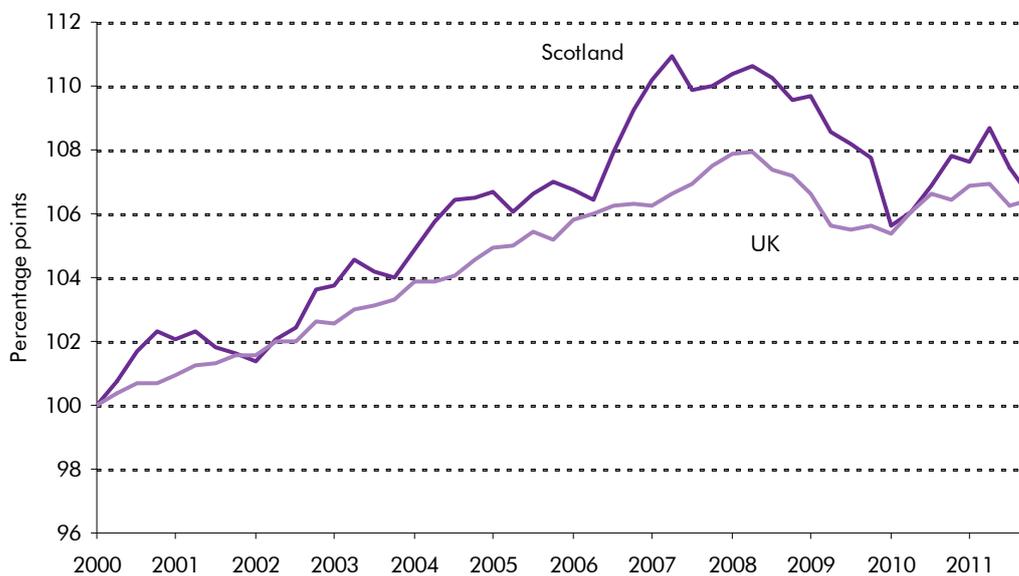
	Scottish resident tax share (A)	Calman wedge (B)	Scottish share of UK income tax (C) = (A)*(B)
1999-00	7.13	42.6	3.04
2000-01	6.96	43.5	3.03
2001-02	7.15	43.9	3.14
2002-03	7.18	43.9	3.15
2003-04	7.38	43.8	3.23
2004-05	7.22	43.6	3.15
2005-06	7.26	43.1	3.13
2006-07	7.36	42.7	3.15
2007-08	7.34	42.8	3.14
2008-09	n/a	n/a	n/a
2009-10	7.28	43.4	3.16

2.17 In the years where the Scottish share lay outside this otherwise narrow range, HMRC believe that this probably reflects variations in the Scottish share of earnings income as measured by the SPI survey rather than real phenomena. To reach this conclusion, HMRC looked at data from a 1 per cent extract of employee records from the National Insurance and PAYE service. This covered earnings only rather than all non-savings, non-dividend income, but suggested that neither of the two outlier years (2000-01 and 2003-04) were out of line with other years. This makes it more likely that these outlier years are largely due to variation in SPI measurement.

<sup>1</sup> If 1999-00 was adjusted to take account of a higher basic rate of income tax in that year, it would also be within the narrow range.

- 2.18 While the Scottish share of income tax has been stable over the past decade, there are a number of factors that could affect the share. These include:
- differential Scottish economic trends;
  - differential movements in the income distribution between Scotland and the UK; and
  - differential impacts of policy measures.
- 2.19 The share could be affected if there were Scottish-specific trends in the labour market. Employment grew more strongly in Scotland than in the UK as a whole in the years prior to the recession, although it has fallen more steeply since the downturn. HMRC have looked at the sensitivity of the share to differential growth in Scottish employment and average earnings growth. Table 2.3 provides estimates of the impact of the Scottish share of illustrative 1 percentage point increases in Scottish employment and average earnings, all else being equal.

Chart 2.1: LFS employment: Scotland and UK



Source: ONS, OBR

**Table 2.3: Impact of changes in Scottish employment and average earnings on Scottish income tax share**

	Change in Scottish tax liabilities (£m) <sup>1</sup>	Change in Scottish share of UK income tax
1 percentage point increase in Scottish employment	+25	+0.02
1 percentage point increase in Scottish average earnings	+49	+0.03

Source: PTM model estimates for 2009-10

<sup>1</sup>10p component of liabilities on non-savings, non-dividend income

**2.20** The share could be affected by differential movements in the income distribution between Scotland and the UK. More than half of income tax in the UK is collected from the top 10 per cent of income tax payers (covering the majority of higher rate taxpayers). Chart 2.2 shows that Scotland has a lower proportion of total taxpayer income generated from individuals with incomes over £50,000.

**Chart 2.2: Scotland and the UK: Proportion of total taxpayer income by income bands**



Source: HMRC, OBR

**2.21** The share could also be affected by the differential impact of income tax policy measures between Scotland and the UK. This is most likely if policies affected the top end of the income distribution given that Scotland has a lower proportion of higher and additional rate taxpayers than the rest of the UK. The stability of the Scottish income tax share between 2000-01 and 2009-10 is likely to have been helped by the fact that in many years tax allowances and limits were raised in line

with inflation. The main income tax policy changes over this period which affected receipts during these years were in Budget 2007 (which removed the starting rate for non-savings income and reduced the basic rate by 2p) and the May 2008 decision on the over-indexation of personal allowances.

- 2.22 An analysis of the effect of these policy changes on the Scottish share indicated that they would have had only a marginal downward effect on the share, probably reflecting that these measures primarily affected basic rate taxpayers. Since 2009-10, a number of policies such as the introduction of the 50p additional rate of income tax for incomes over £150,000, the withdrawal of personal allowances above £100,000 and freezes in the basic rate limits have come into effect. Given that these policies will affect the top end of the income distribution, it is more likely that these will affect the Scottish share.

## Proposed Forecasting Methodology

- 2.23 The UK forecast is generated from separate PAYE and self assessment models. PAYE income tax receipts are projected forward from the last full-year receipts figure. The forecast is generated by applying year-on-year growth due to a number of factors to this baseline, with growth in wages and salaries being the key driver. Wages and salaries can be decomposed into earnings and employment growth.
- 2.24 The PTM model then provides forecasts of marginal tax rates taking account of reliefs and tax allowances. It also estimates the annual cost of indexation of tax thresholds. The forecasting model then applies the marginal tax rate to earnings growth and the average tax rate to employment growth to estimate the increase in PAYE from the base year. This increase is reduced by the expected effect from the indexation of tax thresholds. Changes in receipts due to Budget measures and other off-model factors are then applied to the forecast.
- 2.25 The self assessment forecast for the UK is compiled on a liabilities basis. Information from tax returns is used to model the streams of income within SA (e.g. self employment income, savings income, dividend receipts). Over the forecast period these are each grown in line with a suitable determinant from the OBR forecast. Average effective tax rates are projected using regression relationships and applied to income forecasts. Changes to the tax system are factored in as adjustments to the forecast.
- 2.26 Given the stability of the Scottish income tax share, we propose generating the forecast by projecting forward the latest outturn for the Scottish share. Scottish income tax would be calculated as the Scottish share of UK non-savings, non-dividend income tax liabilities.

- 2.27 To facilitate the transparency of this calculation, we intend to publish a UK forecast for non-savings, non-dividend liabilities and show how it is generated from the headline measures of income tax included in our main receipts table in the EFO.
- 2.28 With a SPI-based outturn only available with a long lag, we would allow for the effect of income tax policy measures coming into effect after this outturn. So for Budget 2012, we would assess whether policies introduced in 2010-11 and 2011-12 and already announced policy measures coming into effect in 2012-13 and 2013-14 would affect the Scottish share in those and future years and then use this adjusted share. We would also need to add on the impact from any measures announced at Budget 2012.
- 2.29 We will publish forecasts for Scottish income tax over a five-year forecast horizon (i.e. up to 2016-17) in Budget 2012. Prior to a decision on the new Scottish income tax rate for the 2016-17 tax year, the forecast assumes that a 10p Scottish rate would be levied. This would leave rates unchanged compared with the rest of the UK. Once a decision on the Scottish rate has been made, this would be incorporated into the forecast.

## Stamp Duty Land Tax

### Scottish share of SDLT Receipts

- 2.30 The Scottish share of UK SDLT receipts is based on actual outturns from HMRC data<sup>2</sup>. Table 2.4 shows the share of receipts from 2005-06 to 2010-11. The share has varied between 3.8 per cent and 6.7 per cent over the past six years. With the average property price in Scotland below the UK average and with just over three quarters of the UK yield coming from properties over £250,000, the Scottish share of SDLT receipts is below the Scottish share of UK GDP.

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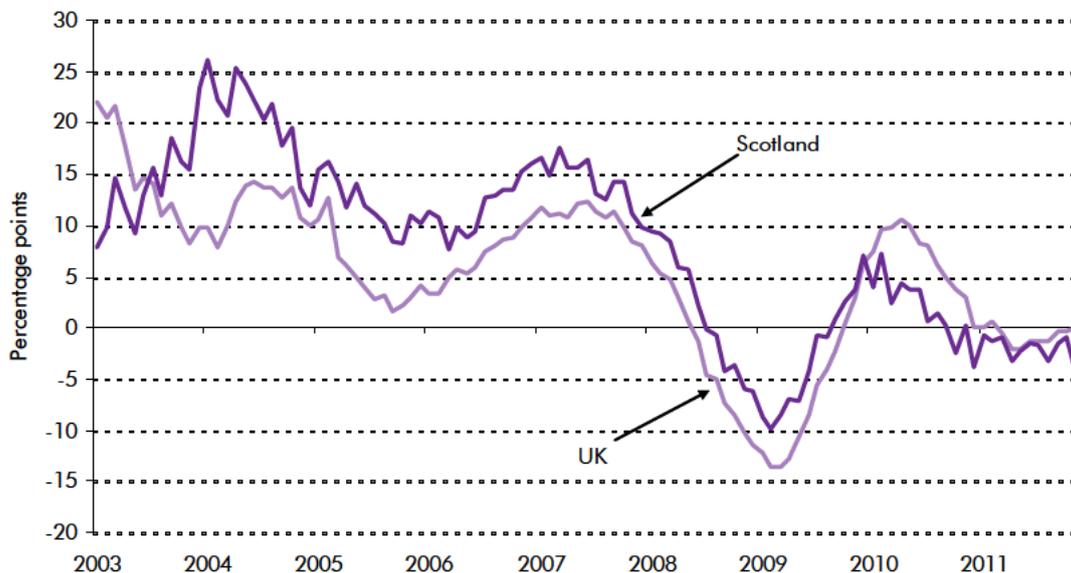
<sup>2</sup> [http://www.hmrc.gov.uk/stats/stamp\\_duty/menu.htm](http://www.hmrc.gov.uk/stats/stamp_duty/menu.htm)

Table 2.4: Scottish share of Stamp duty land tax

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
<b>Total SDLT</b>						
£ million	285	430	565	320	250	330
Share	3.8%	4.5%	5.7%	6.7%	5.1%	5.5%
<b>Residential SDLT</b>						
£ million	185	265	340	185	135	165
Share	4.0%	4.2%	5.1%	6.3%	4.1%	4.1%
<b>Non-Residential SDLT</b>						
£ million	100	165	225	135	115	165
Share	3.5%	5.1%	6.9%	7.3%	7.2%	8.6%

2.31 Changes in the Scottish share of residential SDLT receipts are likely to reflect Scottish-specific trends in property prices and transactions. It could also reflect the structure of SDLT. With property purchasers paying a higher tax rate on the whole property price when they move through a threshold, SDLT receipts can be significantly affected by changes in the proportion of purchasers paying at particular rates.

Chart 2.3: Scotland and UK house price growth



Source: DCLG, OBR

2.32 Charts 2.3 and 2.4 compare Scotland and UK-wide trends in house prices and residential transactions in recent years. It is clear that the trends are highly correlated, which is unsurprising given similarities in credit conditions and the availability of mortgage finance. However, the rise in the share of Scottish residential SDLT up to 2008-09, and the subsequent fall are broadly consistent

with Scottish house price inflation outpacing UK-wide house price inflation prior to the downturn. The recent fall in the share could also reflect the fact that recent measures to help purchasers of lower-priced property may have had a bigger effect in Scotland than UK-wide. A stamp duty holiday for properties under £175,000 was in place between September 2008 and December 2009, while first-time buyers were exempt from SDLT if purchasing a property for less than £250,000 between March 2010 and March 2012.

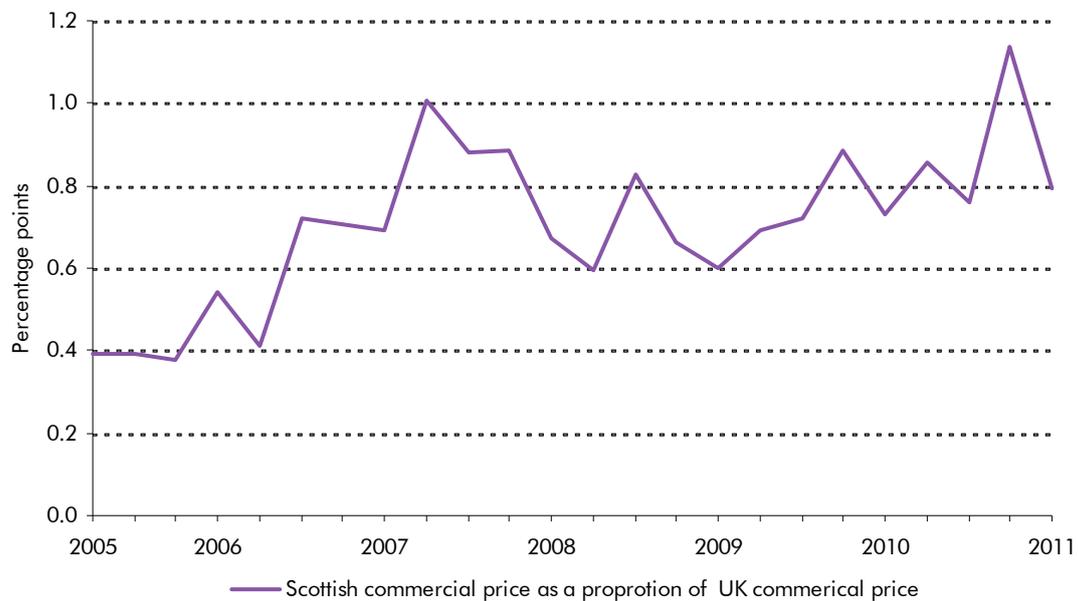
Chart 2.4: Scotland and UK residential property transactions



Source: HMRC, OBR

**2.33** The Scottish share of non-residential SDLT (primarily commercial property) has shown an upward trend in recent years. Chart 2.5 shows that this trend largely reflects the fact that the average price for commercial properties sold in Scotland relative to the UK-wide average commercial property price has risen. There is likely to be volatility between years in the share since the mix of transactions is likely to change between years. Scottish non-residential transactions were just 10 per cent of the number of residential transactions in 2010-11.

Chart 2.5: Scottish commercial property prices relative to UK-wide prices



Source: HMRC, OBR

## Proposed Forecasting Methodology

- 2.34** The forecast for UK SDLT uses a micro-simulation model that has detailed data on individual transactions for a given year. These individual transactions are projected forward by OBR forecasts of residential and commercial property prices and volumes. We are currently considering whether to move to a simpler econometric model that links SDLT receipts to prices and transactions.
- 2.35** We considered two potential forecasting methodologies for projecting Scottish SDLT receipts.
- assuming a constant share of UK SDLT. This could either use the most recent outturn share or an average of the past three years; and
  - relating Scottish SDLT to UK-wide determinants of residential and commercial prices and transactions via an econometric model. For residential prices and transactions there is a strong correlation between UK and Scottish outturns.
- 2.36** Given the variability of the Scottish share of SDLT receipts, an econometric model would seem an attractive option. However quarterly data on Scottish SDLT is only available from 2005 and so the regression would only pick up the relationship between Scottish SDLT and the determinants over that period. Higher average house prices for the UK than for Scotland suggest that over a long time scale,

Scottish prices have grown more slowly than prices UK-wide. However, over the period from 2005, Scottish house prices grew faster than UK-wide house prices.

- 2.37 Concerns about the representativeness of the sample period mean that we have decided to adopt an assumption of a constant share of overall UK SDLT receipts. For residential SDLT, we propose to use the latest outturn share and project this forwards. For non-residential SDLT, we propose to use a three-year average of the Scottish share and project this forward. A three-year average share should lessen the risk of an error resulting from volatility due to changes in the mix of transactions between years.
- 2.38 As with Scottish income tax, we propose to use this to generate a pre-measures forecast. We would then add on the Scottish element of policy measures.
- 2.39 We will publish forecasts for Scottish SDLT over a five-year forecast horizon (i.e. up to 2016-17) in Budget 2012. This implicitly assumes that the current system of SDLT would remain after the tax is entirely devolved to Scotland in April 2015. We would clearly need to look again at how to forecast SDLT in the event that the Scottish Parliament changed the tax.

## Landfill Tax

### Scottish share of Landfill Tax

- 2.40 Landfill tax is a tax on the disposal of waste. The intention of the tax is to encourage waste producers to produce less waste, for example by improving recycling rates. Two rates of landfill tax are applied depending on the type of waste. Landfill tax collected £1.1 billion in the UK in 2010-11.
- 2.41 There is no directly available data on the Scottish share of landfill tax, since landfill operators send in returns that covers sites throughout the UK. The Scottish share is calculated from data on the quantity of waste sent to landfill in Scotland available from the Scottish Environmental Protection Agency. This is compared with a UK estimate based on separate data for England, Wales, Scotland and Northern Ireland. The Scottish share of landfill tax was broadly flat between 2006-07 and 2010-11.

Table 2.5: Scottish Share of Landfill tax

	2006-07	2007-08	2008-09	2009-10	2010-11
£ million	78	90	82	85	99
Share	9.5	10.0	9.5	9.0	9.0

## Proposed Forecasting Methodology

- 2.42 The UK forecast is projected using a forecast for the tonnage of landfill tax. This is then multiplied by the appropriate tax rate. The forecast for the tax base is generated from separate Department of Food, Environment and Rural Affairs (DEFRA) projections of landfilled municipal solid waste and commercial and industrial waste. The amount of municipal waste going into landfill is determined by comparing the cost of alternative waste treatment options. The models are for England so are scaled up to get an UK figure. The split between the two rates is based on historical trends. The tax rates are assumed to be updated in line with inflation in the absence of announced policy.
- 2.43 The UK forecast allows for an adjustment related to the Landfill Communities Fund. Landfill operators are permitted to pay up to a certain percentage of their tax liability to help fund improvements in the environment in the vicinity of landfill sites.
- 2.44 We have decided to adopt an assumption of a constant Scottish share of landfill tax based on an average of the last three years. We would then add on the Scottish element of landfill tax policy measures.
- 2.45 We will produce forecasts for landfill tax over a five-year horizon (i.e. up to 2016-17) in Budget 2012. As with SDLT, the landfill tax forecast implicitly assumes that the current tax regime would remain after the tax is entirely devolved to Scotland in April 2015. We would look again at how to forecast landfill tax if the Scottish Parliament made changes to the tax.

## Aggregates Levy

### Scottish share of Aggregates Levy

- 2.46 The aggregates levy is a tax on the commercial exploitation of rock, sand and gravel. The tax is designed to address the environmental impact of extracting aggregates and to encourage the use of alternative materials. It is charged at a flat rate per tonne. The aggregates levy for the whole of the UK collected £292 million in 2010-11.
- 2.47 There is no directly available data on Scottish receipts from the aggregates levy since operators' returns to HMRC cover sites all around the UK. The Scottish share thus uses data from the UK Minerals Yearbook to estimate the proportion of aggregates production that takes place in Scotland.

Table 2.6: Scottish Share of the Aggregates Levy

	2006-07	2007-08	2008-09	2009-10
£ million	45	52	48	46
Share	14.0%	15.4%	15.1%	16.6%

### Proposed Forecasting Methodology

- 2.48 The UK forecast is generated from a projection of the tax base multiplied by the tax rate. An econometric model relates the sales of primary aggregates to construction industry growth and GDP. The model also allows for the usage of recycled aggregates to increase over time and substitute for the extraction of primary aggregates. The tax rate is assumed to be updated in line with inflation in the absence of announced policy.
- 2.49 We propose assuming a constant Scottish share of UK aggregates levy, based on an average of the last three years. There has been a slight upward trend in the Scottish share since 2006-07, particularly in 2009-10. We will look again at the constant share assumption, depending on whether the rise in the Scottish share is maintained in more recent outturns.
- 2.50 With a sizeable lag in information on Scottish aggregates production, we would project forward from the latest outturn. We would then add on the Scottish element of policy measures.
- 2.51 We will publish forecasts over a five year horizon (i.e. up to 2016-17) in Budget 2012. If aggregates levy is devolved in the future and the tax regime was changed, we would look again at the forecasting methodology.



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