

# Scottish Budget 2017/18: Fiscal Framework Analysis

## Summary

### ***GDP forecasts***

Forecasts for GDP growth are important because they are strongly correlated with tax revenue growth. GDP forecasts are beset by significant uncertainty, in particular relating to the effects and timing of Brexit, and longer-term uncertainties around the outlook for productivity growth.

The OBR's forecasts for UK GDP growth are slightly more optimistic than the average of other forecasters; the OBR assumes that Brexit will have a fairly short-lived effect on levels of economic uncertainty, and productivity growth will return to its long-run average rate by 2020.

The Scottish Government's GDP forecasts are based on similar assumptions for wage and productivity growth as the OBR uses for the UK; the Scottish Government's GDP forecasts for Scotland are thus in line with the OBR forecasts for the UK as a whole, and relatively optimistic compared to the forecasts of other organisations that forecast Scottish GDP growth.

### ***Income tax forecasts***

The Scottish Government is responsible for forecasting Scottish NSND income tax revenues. This forecast is what the UK Government then makes available to the Scottish Government to fund public services throughout the financial year (given that HMRC continues to collect income tax revenue in Scotland). The OBR is responsible for forecasting revenues for the equivalent NSND income tax in the rUK, and this forecast determines the block grant adjustment (BGA).

It is worth reiterating that relative tax revenue growth is what is critical for the Scottish budget. To some extent, slower than forecast tax growth in Scotland matters little as long as it is offset by similarly slower than forecast tax growth in rUK.

Although the Scottish Government's approach to income tax forecasting is slightly different to the OBR's, many of the core assumptions used by the Scottish Government (in particular relating to wage and income growth) are essentially driven by the OBR's assumptions for the UK. The income tax forecasts are sensitive to variation in the assumption for wage growth that is used in the modelling.

Scottish income tax revenues are forecast to grow slightly more quickly than the BGA for income tax, implying that the Scottish budget will be better off than it would have been without tax devolution.

However, it is not clear to what extent this higher Scottish revenue growth (relative to the BGA) is due specifically to the Scottish Government's stated policy objective to set a lower threshold for the Higher Rate in Scotland; and to what extent it reflects differences in underlying tax base growth.

In this respect, it would have been helpful for the Scottish Government to have provided some indicative estimates of the revenue effects of its policy. In its defence, the Scottish Government may argue that this is unnecessary, as there is no clear 'counterfactual' against which the policy can be assessed – it could be argued that a policy to increase the Higher Rate with inflation amounts in effect to doing nothing, thus there is no policy to 'cost'. But given that the Scottish Government has often presented this as a revenue raising policy, it seems surprising not to

provide an estimate of the forecast increase in revenue as a result of indexing the Higher Rate to inflation, as opposed to implementing the UK Government's indexation policy.

A further complication is that the OBR's forecasts for NSND income tax revenues in rUK (which drive the forecast of the BGA) and NSND income tax revenues in Scotland are based on a slightly different set of tax parameters than those adopted by the Scottish Government in its analysis. The OBR is mandated to base its forecasts on policy that has been legislated for, rather than policy commitments. As a result, its forecasts are based on an assumption that, after 2017/18, the UK Government increases the Higher Rate in line with inflation, rather than faster than inflation as the UK Government has proposed (but not yet legislated for).

The upshot is that the OBR forecasts are based on slightly different tax parameters than those used by the Scottish Government, but also tax parameters that are likely to be slightly different from those that will be implemented in practice. As a result, it is difficult to come to definitive conclusions about the extent to which the Scottish budget will be better off or not in future years.

### ***LBTT forecasts***

LBTT revenues are particularly difficult to forecast as they are subject to relatively large fluctuations from one year to the next, and are susceptible to developments within specific parts of the housing market. Both the OBR and Scottish Government have made substantial revisions to revenues from property transactions taxes over the past year, although the revisions made by the Scottish Government are particularly large, given that it has made methodological changes in its forecasting approach.

LBTT revenues in Scotland are forecast to grow more slowly than the BGA for LBTT. This reflects the fact that the OBR is forecasting higher growth in residential property prices and residential transactions in rUK than the Scottish Government is forecasting for Scotland.

A limitation of the Scottish Government forecasting approach is that it does not break down revisions in its forecasts over the past year into the various components of change. It would be instructive to understand – when there has been a change in forecast from one year to the next - what proportion of the revision is due to methodological change, more recent data, policy change, and so on.

### ***Landfill tax forecasts***

The Scottish Government forecasts for Landfill tax are very similar to those of the OBR. However, the Scottish Government forecast implies that Scottish revenues will be higher than the BGA. This largely reflects a comparatively small 'initial deduction' for landfill tax.

### ***Capital borrowing***

The Draft Budget implies that the Scottish Government intends to use its capital borrowing powers in full in 2016/17 and 2017/18. However, no information is provided in relation to how these powers will be used specifically.

## 1. GDP growth forecasts

Why is the rate of GDP growth important? Ultimately, GDP growth is strongly **correlated with tax revenue growth**. If the average tax rate on economic activity remains constant, then economic growth would imply cash receipts would grow in line with the economy.

In fact, if the tax rate is progressive (as it clearly is in the case of income tax, as well as LBTT), the average tax rate will rise as the level of economic activity increases. The Treasury has estimated that a 1% rise in national income will increase taxes as a percentage of income by 0.2%<sup>1</sup>.

However, the correlation between GDP and tax revenues is not perfect. It is possible for GDP growth to be relatively **tax rich or tax poor**, particularly from one year to the next. Public sector wages for example, may not be strongly correlated with GDP in the short run (public sector employment makes up almost 30% of employment in Scotland). Property prices and transactions are strongly procyclical, meaning that they often grow more strongly than GDP during upswings, but fall more quickly than GDP during downswings. And GDP growth in any year may be accounted for in part by higher profits repatriated overseas, which have no bearing on Scottish tax revenues. In summary therefore, as a measure of national income, GDP growth is strongly correlated with tax revenue growth in the long-run, although the correlation may be slightly weaker in the short-run for specific taxes.

The Scottish Government GDP forecasts are shown in Table 1, together with a number of comparable forecasts from other organisations, as well as the OBR's forecasts for UK growth.

In making its forecasts for the UK, the OBR has been keen to stress the significant **uncertainty** surrounding its forecasts. Two critical areas of uncertainty relate to Brexit (when, what type, etc.); and the outlook for productivity growth.

- In relation to **Brexit**, the OBR assumes that the UK leaves the EU in April 2019, and that this slows the pace of trade growth over the course of the next 10 years, and that net inward migration falls, but not to the 'tens of thousands' desired by the current government. Importantly however, whilst Brexit is expected to reduce economic growth in 2017 and 2018 relative to previous forecasts, it is not expected to lead to significantly lower growth in 2019 and beyond (largely because imports and exports are forecast to be equally affected by the post-Brexit trading regime).
- In relation to **productivity**, the OBR assumes that the UK returns to long-run productivity growth of around 2% per annum by 2020, and this underpins future increases in GDP. The OBR recognises that there is substantial uncertainty around this assumption. Since 2010 the OBR has continually assumed that productivity growth would return to its historic trend, and has repeatedly had to push this assumption further into the future.

In the context of this uncertainty, it should be noted that the OBR's forecasts for UK GDP growth are somewhat more **optimistic** than those of the other leading forecasters.

The **Scottish Government's GDP growth forecasts** for Scotland are comparable with the OBR's for the UK as a whole. This is a result of the fact that the Scottish Government largely follows the OBR's key assumptions regarding productivity and wage growth, arguing that these have been highly correlated between Scotland and rUK in the past. The difference between the Scottish Government GDP forecasts for Scotland and the OBR forecasts for the UK are largely the result of higher forecast

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<sup>1</sup> [http://budgetresponsibility.org.uk/docs/dlm\\_uploads/Working-paper-No3.pdf](http://budgetresponsibility.org.uk/docs/dlm_uploads/Working-paper-No3.pdf)

population growth in the UK – in other words, growth in GDP per capita is forecast to be broadly the same in Scotland as in the UK.

As has been noted already, several other organisations have a slightly more **pessimistic** view of the outlook for UK GDP growth, and most organisations who forecast Scottish GDP believe that Scottish growth is likely to be slightly slower than UK growth over the coming years. Thus the FAI, PWC and EY Item Club forecasts for Scottish GDP growth are all for slightly slower growth than is forecast by the Scottish Government.

A point of minor significance is that the Scottish forecasts relate to slightly different measures of GDP. The FAI, PWC and EY forecasts are all forecasts of Gross Value Added, (GVA, also known as GDP at basic prices) calculated according to the output approach. The Scottish Government forecast is of GDP based on the expenditure approach.

Ultimately this difference is not particularly significant, as we would expect the growth rates of GVA and GDP to be largely the same. However, it is worth noting that the Scottish Government doesn't currently publish outturn data on real terms GDP based on the expenditure approach, and thus it is forecasting something for which it is unclear whether or not we will have outturn data on in future.

**Table 1: Growth forecasts**

	2016	2017	2018	2019
Fraser of Allander	1.0	1.1	1.3	1.6
Ernst & Young	0.7	0.4	1.2	1.4
PWC	1.8	0.9		
		2017/18	2018/19	2019/20
Scottish Government		1.3	1.6	1.7
OBR UK Growth Forecast	2.1	1.4	1.7	2.1

## 2. Income tax forecasts

At the outset it is worth re-capping the significance of different sets of forecasts within the Fiscal Framework.

- The Scottish Government is responsible for forecasting **Scottish income tax revenues** (although in future years this roll will be undertaken by the Scottish Fiscal Commission). However, HMRC continues to collect income tax in Scotland. The Scottish Government income tax forecast is important not least because it determines what resources the UK Government will make available to the Scottish Government to draw down throughout the year. For example, if the Scottish Government forecasts that income tax revenues will be £12bn in 17/18, then it will be able to draw down £12bn in resources for that financial year.
- The **Block Grant Adjustment (BGA)** for income tax is a measure of the tax revenues that the UK Government has foregone as a result of transferring NSND income tax to Scotland. The BGA is determined by reference to the 'initial deduction' – the forecast of NSND income tax revenues raised in Scotland in 2016/17 (£11.525bn) – and an indexation mechanism. The indexation mechanism takes into account the growth of comparable revenues (i.e. NSND income tax revenues) in the rest of the UK between 2016/17 and 2017/18 (or any future year). The OBR is responsible for making the rUK forecasts on which the BGA is based.

(There are of course two ways of calculating the indexation, Indexed Per Capita and Comparable Method; these are discussed subsequently).

- If the Scottish Government's income tax forecast is larger than the BGA for income tax, then the Scottish Budget will be higher than it would have been in the absence of tax devolution (and vice versa).
- **Outturn data** will be available around 15 months after the end of the financial year. A number of factors may need to be reconciled on the basis of this outturn data: Scottish revenues may turn out to be higher or lower than forecast; rUK revenues (and hence the BGA) may turn out to be higher or lower than forecast; and the population projection numbers (for Scotland or rUK) used to calculate the BGA will also need to be reconciled. Any difference in Scottish tax receipts or the BGA compared to the original forecasts will be incorporated into the equivalent funding for the following financial year. Thus forecasts for 17/18 will be reconciled in the 2020/21 Budget.
- These reconciliations could work in Scotland's favour or against it. Although the possibility of reconciliation is a distinct risk for the Scottish budget, the risk may not be as great as might be supposed. This is because **forecast error for Scottish tax revenues is likely to be correlated with forecast error for rUK revenues**. For example, imagine that Brexit has a greater negative effect on Scottish revenues than is implied by the Scottish Government's forecast. Given that the Scottish Government's core forecasting approaches and assumptions are similar to those used at UK level, it is likely that in this case, Brexit would also have a greater than forecast impact on rUK revenues. In this case, lower-than-forecast Scottish revenues would be offset by a lower-than-forecast BGA.
- The worst case scenario for the Scottish Government would be if the OBR's income tax forecast for rUK turned out to be too pessimistic, whilst the Scottish Government's income tax forecast for Scotland turned out to be too optimistic. In this case the BGA would be reconciled upwards whilst Scottish revenues are simultaneously revised downwards.

### Scottish Government forecasts

The Scottish Government's approach to forecasting income tax is set out in its Forecast Methodology Paper, and further detail is set out in the SFC's Report on the Draft Budget.

The Scottish Government's approach to forecasting income tax revenues involves firstly forecasting the **size of the tax base** (i.e. the total value of income subject to income tax) in future years; secondly **applying tax parameters** to provide a 'static' forecast of income tax revenues given the size of the tax base; and then making some adjustments to this static forecast to account for behavioural responses and various other 'off-model' adjustments.

The key stage is to forecast the size of the tax base in future years, i.e. how many people in Scotland will be liable to tax, and what will these individuals' tax liabilities be?

The Scottish Government takes as its starting point the **Survey of Personal Incomes** (SPI). The SPI is an HMRC dataset based on the anonymised tax returns of 45,000 Scottish individuals. For each of these individuals, the dataset provides information about the income that that individual received from different sources (employment, occupational pension, dividends, etc.).

The most recent SPI dataset available is for 2013/14. The 2013/14 data therefore has to be '**rolled forward**', i.e. adjusted to take account of how incomes have changed since 2013/14 and how

incomes may evolve in future; and similarly how changes in demographics and labour-market participation may evolve.

This 'rolling forward' of data from 2013/14 to 2015/16 can be undertaken with a reasonable degree of confidence, since we know (from other survey data) how key variables such as **wages and employment** have evolved in the intervening years. For future years however there is much more uncertainty about how these factors may change.

The Scottish Government's methodology paper sets out clearly the assumptions it is using for **income growth by source, and for demographic change by age group**. The greatest uncertainty is around future wage and salary growth. This is discussed further in Box 1.

**Box 1: Key determinants of the income tax forecasts: wages and employment**

The forecast of hourly earnings growth used by the Scottish Government in its income tax forecast is derived from the OBR's forecasts for UK wages and salaries growth (Table 2)<sup>2</sup>. This is justified on the grounds that UK and Scottish earnings tend to be strongly correlated.

This is undoubtedly true. There is no guarantee of course that the OBR's forecasts for wage growth won't be subject to large error. Indeed, the OBR's forecasts for earnings growth have been repeatedly revised down. In its latest Forecast Evaluation Report<sup>3</sup>, the OBR notes '*over the long term, productivity growth is the most important driver of average earnings growth*' but that '*productivity growth – output per person or per hour worked – has fallen well short of our forecasts*'. The OBR explains that this lower productivity growth than forecast explains why average earnings growth has consistently been lower than it has forecast. This lower than forecast wage growth has consistently resulted in large downward revisions to the OBR's forecasts for income tax revenue growth.

Looking to the future, the OBR continues to assume that productivity growth will return to its long run average of 2% per year, although it recognises significant uncertainty around this assumption. Its November 2016 Economic and Fiscal Outlook states: '*As ever, the outlook for trend productivity is the most important and most uncertain judgement in our (and most people's) economic forecast. Needless to say, there is greater than-usual uncertainty around any judgements about the path of potential output when post-Brexit policy settings are not known. But even when those arrangements become clearer, their impact on potential output growth will remain highly uncertain.*'

**Table 2: Key determinants of the income tax forecasts (percentage change on year earlier)**

	2017-18	2018-19	2019-20	2020-21	2021-22
<b>SG Assumptions</b>					
Private Sector Earnings Growth <sup>4</sup>	2.3	3.2	4.2	4.8	4.9
Public Sector Earnings Growth	2.2	2.2	2.2	2.2	2.2
Other Income Growth	2.3	2.9	3.6	4.1	4.1
Employment growth	0.3	0.2	0.3	0	0.5
<b>OBR assumptions</b>					
Wages and salaries	2.5	3.3	3.9	4.1	4.1
Employment growth	1.4	0.2	0.5	0.4	0.3

In this context, is it wise for the Scottish Government to follow the OBR's forecasts for wage and productivity growth? Arguably, the nature of Scotland's fiscal framework means that, to an extent, it makes sense for Scotland to follow OBR assumptions if the economic determinant in question (in this case, wage growth) is likely to be strongly correlated between Scotland and rUK. If the OBR

<sup>2</sup> The Scottish Government's wage growth forecasts are not identical to the OBR's wage growth forecasts, but effectively the OBR forecasts have been used as an input to the Scottish Government model.

<sup>3</sup> [http://budgetresponsibility.org.uk/docs/dlm\\_uploads/Forecast-evaluation-report-October-2016-1.pdf](http://budgetresponsibility.org.uk/docs/dlm_uploads/Forecast-evaluation-report-October-2016-1.pdf)

<sup>4</sup> The Scottish Government takes the OBR's forecasts for wage growth in the UK, and disaggregates this into a forecast for public sector wage growth (based on stated public sector pay policy) and a forecast for private sector wage growth.



forecasts turn out to be subject to large errors at UK level, chances are that Scottish forecasts will be subject to errors of a similar scale. In this case, revisions to Scottish forecasts may well be offset by equivalent revisions to rUK forecasts and thus the BGA.

However, it could be argued that the Scottish economy is facing greater headwinds than the UK as a whole. In particular, ongoing weakness in the offshore sector may dampen wage growth. Indeed, the latest wage data indicates that wages grew less quickly between 2015 and 2016 in Scotland than in the UK as a whole. This differential wage growth was particularly marked among higher wage earners, who account for a disproportionate amount of tax revenue. Moreover, the latest GDP data also suggests the Scottish economy may be lagging the UK as a whole slightly.

There is perhaps a case therefore for arguing that there are greater downside risks to the Scottish forecasts than there are to the UK forecasts. In this context, assuming that Scotland will match the UK in relation to key economic determinants exposes the Scottish budget to the risk that its revenues will be revised down to a greater extent than is the BGA.

Table 2 also shows that the Scottish Government is forecasting slower employment growth than the OBR is for the UK as a whole. This largely reflects forecast demographic changes, rather than divergence in the employment rate.

In its Report on the Draft Budget, the SFC undertakes some **sensitivity analysis** to examine the impact on NSND income tax revenues of alternative paths for employment and wage growth. These are expressly not alternative forecasts, but are undertaken to understand how sensitive the Scottish Government forecasts are to variation in assumption.

As such, it is not entirely clear how helpful the scenario analysis is. It demonstrates that if we assume different things about wage growth, we get a different forecast for income tax revenue. But there is **no consideration of the relative likelihood** of the various different scenarios examined.

Having thus projected forward estimates of incomes and population, the Scottish Government model then applies known tax parameters to estimate future tax liabilities in each future year.

The Scottish Government then discusses the possibility of **behavioural change**. Its Methodology report presents some plausible estimates of Taxable Income Elasticities (TIE's). TIEs measure the extent to which an individual's pre-tax income changes in response to changes in that individual's marginal tax rate. However, the Scottish Government's report then goes on to point out that responses to changes in *average* tax rates are likely to be lower than the response to changes in *marginal* tax rates. The tax policy change outlined in the Draft Budget largely affects individuals' average tax rate rather than their marginal tax rate<sup>5</sup>. The Scottish Government's Methodology Report does not identify the extent to which its estimates of behavioural effects influence its final revenue forecast, although it states that the effect is very small.

In a final stage, a number of **'off-model' adjustments** are made to the forecasts, to account for things such as an expected rise in the number of incorporations (which is expected to reduce NSND income), gift aid from charitable contributions made by Scottish taxpayers, and the removal of some

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<sup>5</sup> An average tax rate is the percentage of total income that is paid in tax; a marginal tax rate is the tax rate that an additional pound of income would be liable to. The Scottish Government's Higher Rate tax policy alters the average tax rate of all Higher Rate taxpayers, but it only alters the marginal tax rate of those taxpayers who earn income between the Scottish and rUK Higher Rates.

tax advantages in salary sacrifice schemes. Taken together, these elements reduce Scottish liabilities by £274m per year by 2020/21.

### Comparison with OBR forecasts

Since 2012 the OBR has forecast the revenues from those taxes that are devolved to the Scottish Parliament. The OBR forecasts of Scottish revenues have **no direct bearing** on the Scottish budget, and are published essentially because of the OBR’s statutory duty to forecast UK tax revenues.

For income tax, the OBR essentially assumes that **Scotland’s share of UK NSND income tax revenues** will remain broadly in line with the recent past, *‘unless available evidence suggests we should adjust those assumptions’*.

The OBR forecasts of Scottish NSND revenues also assume that Scotland **matches the UK’s income tax policy**. Importantly however, in making its forecasts, the OBR is mandated to reflect actual UK Government policy (not intentions or ambitions). Manifesto ‘commitments’ that have not yet been legislated for are noted as a source of risk but are not explicitly incorporated into the forecasts.

This means that the OBR’s income tax forecasts (for the UK as a whole, and for Scotland) are based on the assumption that the Higher Rate threshold in the UK will be £45,000 in 2017/18 (which has been legislated for), but that after 2017/18, the Higher Rate threshold will **increase in line with inflation**. Moreover, the OBR does not model the UK Government’s commitment to raise the Personal Allowance to £12,500 by the end of the Parliament (instead, the Personal Allowance is forecast to increase by inflation).

Table 3 compares the tax parameters used by the Scottish Government in its modelling with those used by the OBR in its modelling.

**Table 3: Parameters for Personal Allowance and Higher Rate threshold used in SG and OBR modelling**

	Personal Allowance		Higher Rate threshold	
	SG	OBR	SG	OBR
2017-18	£11,500	£11,500	£43,430	£45,000
2018-19	£11,833	£11,788	£44,516	£46,125
2019-20	£12,167	£12,082	£45,629	£47,278
2020-21	£12,500	£12,324	£46,551	£48,224
2021-22	£12,750	£12,570	£47,482	£49,188

Table 4 below sets out the OBR’s assumptions of the Scottish share of UK NSND income tax revenues over the next five years. The **Scottish share** is expected to grow very fractionally.

The implication of the OBR forecast – when one considers that Scotland’s population is projected to grow relatively more slowly than rUK’s – is that Scottish income tax revenues *per capita* will actually grow more quickly than those of rUK (Table 4).

**Table 4: OBR forecasts for NSND income tax revenue, Scotland and UK**

	2017-18	2018-19	2019-20	2020-21	2021-22
Scottish share of UK NSND tax revenues (%)	7.35	7.35	7.36	7.37	7.37
Scottish NSND IT forecast (£m)	11768	12220	12770	13432	14181

ONS population projection (Scotland)	5.40	5.42	5.44	5.45	5.47
ONS population projection (rUK)	60.85	61.29	61.71	62.12	62.52
Implied per capita revenue growth (Scotland)		3.5%	4.2%	4.9%	5.2%
Implied per capita revenue growth (rUK)		3.1%	3.9%	4.1%	4.7%

The Scottish Government and OBR forecasts for income tax are shown in Table 5. **The Scottish Government's forecasts are slightly higher than the OBR's.** However, as will be discussed further below, we don't know to what extent the Scottish Government forecasts are higher because of policy differences being modelled, or because of differences in the growth of underlying determinants, or because of methodological differences used in the modelling.

**Table 5: NSND Income Tax forecasts (£m)**

	2017-18	2018-19	2019-20	2020-21	2021-22
SG Draft Budget	11,829	12,290	12,912	13,647	14,559
OBR Autumn Statement	11,768	12,220	12,770	13,432	14,181
Difference to OBR forecast	61	70	142	215	378
Difference to OBR (%)	0.5%	0.6%	1.1%	1.6%	2.7%

#### Block grant adjustment for income tax

To re-cap, the block grant adjustment (BGA) for income tax is a **counterfactual estimate** of the income tax revenues that the UK Government is likely to have foregone as a result of transferring NSND income tax revenues to the Scottish Government.

The BGA is calculated by reference to an 'initial deduction' and an 'indexation mechanism'. The **initial deduction** is the revenues raised from NSND income tax in Scotland in the year prior to devolution (2016/17) which is forecast by OBR to be £11.525bn.

The **indexation mechanism** is calculated according to both the Indexed Per Capita (IPC) method and the Comparable Method (CM), but it is the IPC method that will be used to calculate the block grant until 2020/21<sup>6</sup>:

- The **Indexed Per Capita (IPC)** indexation mechanism inflates the initial deduction by assuming that income tax revenues in Scotland would – in the absence of devolution – have grown at the same rate per capita as is observed in rUK. Essentially, the BGA represents the income tax revenues that would have been raised in Scotland if revenue growth per capita in Scotland had matched revenue growth per capita in rUK in the years since 2016/17.
- The **Comparable Method** inflates the initial deduction by allocating Scotland a population share of any increase in rUK income tax revenues (controlling for Scotland's lower tax revenues per capita).

**Scottish NSND revenues are forecast to be higher than the income tax BGA in each year of the forecast** (Table 5), regardless of whether the IPC or CM methods is used to calculate the BGA. The BGA is higher when calculated according to CM than IPC because IPC takes into account in full Scotland's slower population growth, whereas CM only takes population growth into account at the margin.

<sup>6</sup> For further details see the paper and presentation provided at the [Finance Committee Business Planning Session](#).

**Table 5: Income Tax block grant adjustments (£m)**

	2017-18	2018-19	2019-20	2020-21	2021-22
SG income tax forecast	11,829	12,290	12,912	13,647	14,559
Block grant adjustment (IPC)	11,750	12,159	12,672	13,233	13,898
Block grant adjustment (CM)	11,790	12,240	12,794	13,399	14,110
Difference to BGA (IPC)	79	131	240	414	661
Difference to BGA (CM)	39	50	118	248	449

The fact that Scottish revenues are forecast to be higher than the BGA implies that **Scottish revenues per capita are forecast to grow relatively more quickly in Scotland** relative to rUK. Table 6 shows the implied relative per capita growth rates.

**Table 6: Implied relative per capita growth rates**

	2017-18	2018-19	2019-20	2020-21	2021-22
Implied per capita growth rate of rUK income tax revenues (BGA)	1.5%	3.0%	3.8%	3.9%	4.5%
Implied per capita growth rate of Scottish revenues (Scottish Government forecast)	2.2%	3.4%	4.6%	5.2%	6.2%

However, it is important to reiterate that the forecast for the BGA in the Draft Budget is not actually based on the stated policy ambitions of the current UK Government.

As noted above, the **OBR is mandated to reflect actual legislated UK Government policy** (not intentions or ambitions). Despite having made a Manifesto commitment to increase the Higher Rate threshold to £50,000 by 2020/21, the UK Government has so far only legislated for a higher than inflation increase in the Higher Rate in 2017/18. Similarly, despite having made a Manifesto commitment to increase the Personal Allowance to £12,500 by 2020/21, the UK Government has so far only legislated for an above inflation increase in 2017/18 (to £11,500).

Thus assuming that the UK Government follows through with its commitments to increase the Higher Rate threshold above the rate of inflation, **the block grant adjustment for income tax may turn out to be lower than has been estimated here** for years beyond 2017/18. The Scottish Budget may thus be in a stronger position than these BGA forecasts indicate.

### Income tax - summary

In general the description of the income tax modelling approach and the assumptions used is good. Clearly there would be scope to make some refinements to the approach. For example, more consideration could be given to the possibility of differential wage growth at different parts of the income distribution. As noted by the SFC in its report however, this seems unlikely to make major differences to the forecast itself.

The Scottish Government's forecasts are methodologically defensible. However the main limitation with the way in which the forecasts are presented is that there is **no attempt to provide an estimate of the revenues raised from the policy to freeze the Higher Rate**. The Scottish Government's explanation for this may be that there is no clear 'counterfactual' – it could be argued that a policy to increase the Higher Rate with inflation amounts in effect to doing nothing, thus there is no policy to 'cost'. But given that the Scottish Government has often presented this as a revenue raising policy, it seems odd not to provide an estimate of the increase in revenue forecasts as a result of

indexing the Higher Rate to inflation, as opposed to following the UK Government's indexation policy.

Another **limitation** of the information together (the Scottish Government forecasts, the OBR forecasts for Scottish tax revenues, and the forecast BGA) is that we are comparing revenue forecasts under different policy assumptions.

Thus it is not clear to what extent higher tax revenue growth in Scotland (relative to the BGA) reflects:

- **Faster underlying growth** in Scottish income tax revenues per capita (assuming equivalent policy in Scotland and rUK)
- The **effect of the Scottish Government policy** to implement a lower threshold for Higher Rate income tax in Scotland.

Finally, it should be noted that although the Draft Budget provides the estimates of the income tax BGAs (and the BGAs for other taxes), it does not show how these BGAs have been calculated. Arguably it would not be appropriate to **set out the calculations** in full in the Draft Budget, as this would require a reasonable amount of space, which the majority of readers are unlikely to be interested in the details of. Nonetheless, the calculations should be set out somewhere in the **public domain**. At the moment, they do not appear to be. In order to derive the BGA calculations, it is necessary to:

- Access the BGA formulae from the Annex to the Fiscal Framework
- Identify the 'initial deduction' set out in the Draft Budget
- Access the OBR's forecasts for 'comparable' tax revenues in rUK (which are contained within an Annex hidden away on the OBR's website); and
- Access the relevant population projections (which at the moment do not appear to have been published anywhere, and are only available by contacting the Scottish Government directly).

### 3. LBTT

As with income tax, the Scottish Government is responsible for forecasting Scottish LBTT revenues, whilst the OBR forecasts of Stamp Duty revenues from rUK determine the BGA for LBTT.

However, the important difference is that, whereas HMRC will continue to collect income tax revenues raised in Scotland, revenues from LBTT (and the other fully devolved taxes) will be collected by **Revenue Scotland**, and these receipts will be available to the Scottish Government to fund spending. This means that there is no need for reconciliation between the Scottish Government's LBTT forecast and the actual LBTT outturn.

However, there will need to be a **reconciliation** between the forecast of the BGA for LBTT and the actual BGA, based on outturn data from rUK. The Annex to the Fiscal Framework states that there will be in-year updates to the BGA for LBTT reflecting in-year changes to the forecast of rUK receipts, in order to protect the Scottish budget from UK-wide in-year shocks. There will also be a full reconciliation of the BGA to outturn after the end of the financial year. (However, it was agreed as part of the Fiscal Framework that there will not be a reconciliation to the 2015/16 BGA for LBTT or Landfill Tax; the 2016/17 BGA for LBTT is likely to be reconciled in around September 2017).

Forecasting revenues from property transactions taxes is generally more difficult than it is for income tax (Box 2).

#### **Box 2: Forecasting property transactions taxes**

In its latest Forecast Evaluation Report, the OBR states:

*'Stamp duty land tax (SDLT) is one of the more volatile sources of receipts – the standard deviation of annual growth over the past five years has been 11.9 per cent, compared to just 1 per cent for overall receipts. In recent years, SDLT receipts have been a large source of fiscal forecasting errors. In line with that, we have revised our SDLT forecasts proportionally more than for any other major tax (bar the even-more-volatile CGT and North Sea oil and gas revenues).'*

There are many reasons why forecasting receipts from a tax like SDLT can be challenging. Three in particular are worth highlighting:

- It is difficult to map economic determinants to the true tax base (i.e. relatively few properties are transacted in any one year);
- The tax schedule is very progressive meaning a large proportion of tax revenues are derived from very few transactions
- The tax regime has been subject to large policy changes in recent years.

Between November 2015 and November 2016, the OBR took £2bn (14%) off its forecasts for SDLT revenues in 2017/18.

#### **SG forecasts**

There are two key elements behind the LBTT forecast: the distribution of property prices, and the number of property transactions.

For **residential property prices**, the Scottish Government makes an assumption about the distribution of house prices based on what is known about the mean and median house price. This assumed distribution is then adjusted slightly based on transaction data in 2015/16. House prices are assumed to grow in line with historic growth rates (more on this below).

The forecasts for residential LBTT have been **significantly revised down** compared to this time last year. There are two reasons for this: first, outturn data has become available which indicated that the market had been less buoyant than previously assumed (in terms of both prices and transactions); second, there have been significant changes to the forecasting methodology.

House prices are forecast to grow in line with historic price growth. It is here that there have been methodological changes to this year's forecasts relative to the published forecasts last year. Essentially, last year's forecasts for house price growth were heavily influenced by trends in house prices and transactions growth in the years leading up to the financial crisis. This year, the years leading up to the financial crisis are treated more as exceptional rather than normal in a long-term perspective, and are thus given less weight in estimating likely future trends. (House price growth is now modelled to converge on a long-run average of 1.3% rather than 4.5%, whilst the turnover ratio is modelled to converge on 5.1% rather than 6%).

Forecasting receipts from the **Additional Dwelling Supplement (ADS)** is clearly problematic given the – to date – limited data available on the sale of homes not for owner occupation. On the basis of currently available data, it is assumed that the transactions permanently liable for ADS constitute 16% of total residential transactions, with a mean purchase price for ADS transactions some 10% lower than for all residential transactions. It is then assumed that the average price and volume of ADS transactions will follow those of the overall market.

No adjustment for **behavioural effects** are made, since there are no policy changes in 2017/18, and it is assumed that any long-run behavioural responses are already incorporated into the 2016/17 baseline data from which the future forecasts are made.

Forecasts for **non-residential LBTT** are driven largely by the OBR’s forecasts for commercial property prices and transactions. This is justified on the grounds that non-residential receipts in Scotland have closely tracked those of the UK as a whole, historically. Non-residential LBTT receipts are particularly volatile from one year to the next, so the forecasting methodology is to project future revenues from an average of receipts in the past three years.

The forecasting methodology is reasonable and well explained. As with income tax, the main limitations are presentational. Specifically, there is insufficient information on the components of change which have influenced the forecast revisions. In other words, it would be useful to know what proportion of the revision to LBTT forecasts since last year is due to:

- Outturn data
- Methodological change
- Policy change (i.e. ADS)

### Comparison with OBR forecasts

The OBR’s methodology for forecasting **residential LBTT** is quite different from the Scottish Government’s. It uses the HMRC microsimulation model that enables the LBTT tax schedule to be applied to a full sample of house price transactions for a given year, with house price and property transactions inflated according to OBR forecasts.

For **commercial LBTT**, the OBR assumes that Scottish prices and transactions grow in line with those for the UK as a whole. Thus the methodology is similar to the Scottish Government methodology.

The Scottish Government’s forecasts for LBTT are 6% lower than the OBR’s in 2017/18, falling to 22% lower by 2021/22 (Table 8). This is accounted for by lower growth in residential LBTT revenues in the Scottish forecasts relative to the UK forecasts.

**Table 8: Comparing Scottish Government and OBR forecasts for LBTT revenues**

	2017-18	2018-19	2019-20	2020-21	2021-22
Scottish Government forecast					
Residential LBTT	283	310	329	345	362
(Of which ADS)	72	75	78	80	82
Commercial LBTT	224	233	242	252	262
<b>Total</b>	<b>507</b>	<b>543</b>	<b>571</b>	<b>597</b>	<b>624</b>
OBR forecast					
Residential LBTT	340	387	437	496	554
(Of which ADS)	54	57	60	66	

Commercial LBTT	199	209	219	230	242
Total	539	596	656	726	796
SG relative to OBR	-6%	-9%	-13%	-18%	-22%

#### Block grant adjustment for LBTT

The block grant adjustment for LBTT, calculated according to both the IPC and CM methods, is shown in Table 9. The OBR is forecasting 'equivalent' SDLT revenues per capita to grow slightly more rapidly than the Scottish Government is forecasting that LBTT will grow for Scotland. As a result, **the BGA is expected to be larger than Scottish revenues** by £38m in 2017/18 (Table 9).

Ultimately, the reason for this difference is of course that the OBR is forecasting faster growth in both house prices and transactions for residential property in rUK than the Scottish Government is for Scotland (Table 10).

**Table 9: The block grant adjustments for LBTT**

	2017-18	2018-19	2019-20	2020-21	2021-22
BGA (IPC)	545	585	634	689	741
BGA (CM)	550	592	643	700	755
Scottish forecast	507	543	571	597	624
Net impact against IPC	-38	-42	-63	-92	-117

**Table 10: Key assumptions underpinning the forecasts of residential LBTT revenues and SDLT**

	2017-18	2018-19	2019-20	2020-21	2021-22
<i>Scottish Government forecast (LBTT)</i>					
Mean price growth	1.8%	1.4%	1.3%	1.3%	1.3%
Transactions growth	0.8%	2.4%	1.9%	1.5%	1.2%
<i>OBR forecast (SDLT)</i>					
Mean price growth	3.6%	4.3%	4.7%	4.7%	4.8%
Transactions growth	6%	3%	2%	2%	1%

## 4. Landfill Tax

The Scottish Government's forecasts for revenues from Landfill Tax are shown in Table 11. These forecasts are driven by an assumption that the level of **taxable waste** remains constant over the forecast period, but that the amount sent to landfill falls reflecting increases in incinerator capacity.

Scottish landfill **tax rates** are assumed to mirror those in rUK, and are increased in line with forecast RPI inflation.

The SFC report notes that **risks** to the Scottish landfill tax revenues include: delays to incinerator capacity coming on stream (which would increase revenues), additional recycling and pre-processing capacity coming on stream (which would reduce revenues by reducing waste to landfill), and the ban on biodegradable municipal waste which comes into effect in 2021.

In its forecasts, the OBR assumes that landfill tax receipts in Scotland follow the same profile as the rest of the UK. Outturn Scottish receipts – published by Revenue Scotland, and using the first quarter of 2016/17 as the latest data – are used to set the starting level of the forecast. As can be seen from



Table 11, the **difference between the Scottish Government and OBR forecasts are marginal**, certainly beyond 2017/18.

The BGA for landfill tax is forecast to be lower than Scottish receipts. This is essentially because the initial deduction, which was based on an average of the GERS and HMRC methodologies for apportioning UK Landfill Tax revenues to Scotland, is relatively low.

**Table 11: Forecasts for Scottish Landfill Tax (£m)**

	2017-18	2018-19	2019-20	2020-21	2021-22
SG Nov	149	118	109	112	106
OBR Nov forecast	134	118	110	105	103
BGA (IPC)	119	104	97	92	90
BGA (CM)	120	106	99	94	93

## 5. Air Passenger Duty and Aggregates Levy

The OBR provides forecasts for Scottish receipts from APD and Aggregates Levy, shown in Table 12 (the Scottish Government has not provided forecasts for these taxes).

For the UK as a whole, the OBR forecasts **APD** receipts by assuming that passenger numbers grow in line with the GDP forecast. APD rates are assumed to rise in line with RPI. Scotland's share of UK APD revenues is estimated at 9.4% (this represents the mid-point between HMRC and GERS estimates of the Scottish share. This share is forecast to remain constant. Given these assumptions, both the UK and Scottish APD forecasts are expected to increase 27% between 2016/17 and 2021/22.

For the UK as a whole, the OBR forecasts revenues from **Aggregates Levy** based on forecast construction sector activity, combined with assumptions about the likely increase in use of recycled aggregates. The Scottish forecast is based on an assumption that the Scottish share of this revenue remains at 14.5% (this being Scotland's share in 2014/15).

**Table 12: OBR forecasts for Scottish APD and Aggregates Levy receipts (£m)**

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Aggregates levy	53	50	53	53	53	54
APD	302	313	326	342	360	378

## 6. Capital borrowing

Under the Scotland Act 2016, the Scottish Government will be able to borrow up to **£450m** in any year for capital investment, within an overall limit of £3bn. This represents an increase on the powers in the Scotland Act 2012, which enabled borrowing of up to 10% of the capital budget in any year (just over £300m) within an overall limit of £2.2bn.

The Draft Budget indicates that the Scottish Government plans to **utilise its £316m capital borrowing powers in full in 2016/17**<sup>7</sup>. To date however, no borrowing has been drawn down. The Draft Budget provides no specific indication as to how the Government intends to use the borrowing powers in 2016/17.

<sup>7</sup> Table 5.06 identifies a capital repayment of £30m in 2017/18. The Draft Budget states: 'The £30 million budget to cover the capital borrowing repayments reflects our estimated repayment costs for planned borrowing in 2016-17, although final figures for this commitment will not be settled until the end of 2016-17.'

Similarly, the Draft Budget also states that, for 2017/18 *'The proposed DEL capital budget reflects the Scottish Government's intention to utilise the borrowing powers available through the Scotland Act 2016 up to a maximum of £450 million.'*

**No specific details** are provided on what the borrowing powers will be used to support. The Draft Budget states *'Given the variety of factors that impact on major projects, the capital programme will be proactively managed through the financial year.'*

It is likely to be the case that any borrowing in 2016/17 (and 2017/18) is likely to occur at the end of the financial year once the full CDEL allocation has been used up. On the other hand, the Government may be keen to protect its borrowing limit, in case this is needed to provide 'cover' for schemes that are re-classified from the **NPD programme**<sup>8</sup>.

In either case, further clarity on the Government's planned use of the capital borrowing powers would be welcome.

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<sup>8</sup> In 2015/16, following reclassification of various NPD projects as 'on balance sheet', the Scottish Government came to an accounting agreement with UK Treasury to use its capital borrowing allocation for 2015/16 as 'cover'. This does not actually mean that the capital borrowing powers were used (and thus there will be no interest rate charges); but the full value of the capital project will score on the balance sheet.