Scottish Fiscal Commission

Non-Technical Summary of Report on Draft Budget 2017-18

December 2016

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1. Summary

1.1 The Scottish Fiscal Commission (the Commission) was established in June 2014 as a non-statutory body to provide independent scrutiny of Scottish Government forecasts of receipts and economic determinants from taxes devolved to Scotland.

1.2 From April 2017 the Commission will assume responsibility for the production of independent forecasts; this year is therefore the last year in which the Commission will scrutinise the Scottish Government's forecasts.

1.3 This summary provides an overview of the Scottish Government's approach to forecasting, the Commission's assessments of the reasonableness of the Scottish Government's forecasts and an assessment of the risks to the forecasts for Income Tax, Land and Buildings Transaction Tax (LBTT), Scottish Landfill Tax (SLfT) and Non Domestic Rates Income (NDRi).

1.4 The full report can be found on the Commission's website www.fiscal.scot.

2. Key Findings

2.1 The Commission finds the Scottish Government's forecasts of devolved tax revenues for the Draft Budget 2017-18 to be reasonable. The forecasts of the economic determinants underpinning the forecasts for Non-Domestic Rate income are also considered reasonable. There have been significant developments in the approaches adopted by the Scottish Government this year, although there remains scope for further improvement in methodology to enhance the quality of future forecasts.

2.2 This is the first year that the Commission has provided independent scrutiny of the Scottish Government's forecasts of income tax liabilities. Forecasting Non-Savings, Non-Dividend income tax liabilities is a complex task with a range of contributing elements forecast separately including demographic trends, labour market participation rates and the future paths of employment and wages. The Commission has identified a number of key variables that appear to have an especially significant role to play in determining the forecast, namely private sector earnings growth, public sector earnings growth and employment growth. In the coming years the Commission will undertake future work which will pursue further economic modelling of the Scottish labour market that could provide an additional source of information on earnings and employment trends.

2.3 The evidence base in Scotland to inform judgements on any potential behavioural effects of tax policy changes is limited. It will be important to keep under review the SFC's understanding of these issues and to consider whether evidence exists, or may be generated, that might shed further light on these issues that will be useful in a Scotland-specific setting.

2.4 The Scottish Government's forecast for residential LBTT revenues is lower than for last year's Draft Budget, reflecting weakness in recent outturn data and methodological developments. Looking ahead, as the Commission becomes responsible for the production of LBTT forecasts it will continue to monitor developments in housing and other markets to inform future developments in forecasting.

2.5 Forecasts for Additional Dwelling Supplement (ADS) revenues have increased as data have become available to provide a more detailed understanding of the additional homes market. An area of uncertainty in the ADS forecasts is the extent to which homeowners will seek to reclaim their initial ADS tax liabilities. The SFC will continue to monitor this closely.

2.6 The forecast methodology for non-residential LBTT revenues has not changed significantly from the one employed for Draft Budget 2016-17. Once the Commission becomes responsible for the production of non-residential LBTT forecasts it will explore the possibility of utilising more Scotland-specific microeconomic data in forecasting non-residential LBTT whilst recognising such a task may be complicated by taxpayer confidentiality issues and the volatility inherent in the non-residential property market in Scotland.

2.7 After challenge from the Commission, the Scottish Government have changed their forecast methodology for SLfT revenues for Draft Budget 2017-18. The forecast now focuses on forecasting the amount of waste that will be sent to landfill each year rather than employing a target-based approach. A number of factors will affect this, the largest of which is the considerable incinerator capacity which is currently under construction or planned in Scotland and due to come on stream in the next five years. The Commission will continue to monitor these factors over the coming years.

2.8 The Commission scrutinises the economic determinants underpinning the NDRi forecast: growth in the tax base and growth in the tax rate. The forecast methodologies are similar to those employed in Draft Budget 2016-17: OBR inflation forecasts are used to forecast changes in the tax rate over the forecast period and the tax base is modelled using its long run average, with an adjustment for an observed cyclical pattern.

3. Income Tax

3.1 The Scotland Act 2016 provides the Scottish Parliament with the power to set the rates and band thresholds that will apply to all non-savings non-dividend (NSND) income tax paid by Scottish taxpayers from April 2017. These revenues are devolved to the Scottish Parliament; other income tax revenues remain reserved.

3.2 The Scottish Government has set the rates and band thresholds (excluding the personal allowance) for tax year 2017-18. This year, for the first time, the Commission has provided independent scrutiny of the Scottish Government's forecasts of income tax liabilities.

3.3 The Scottish Government's NSND income tax forecasts are shown in Table A, below. **The Commission considers these forecasts to be reasonable**.

Table A: Scottish Government forecasts for Income Tax liabilities

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
NSND Income Tax	11,829	12,290	12,912	13,647	14,559

3.4 The forecasts reflect the Scottish Government's income tax policy to freeze the higher rate threshold in real terms in 2017-18 and increase it by a maximum of inflation until 2021-22.[1]

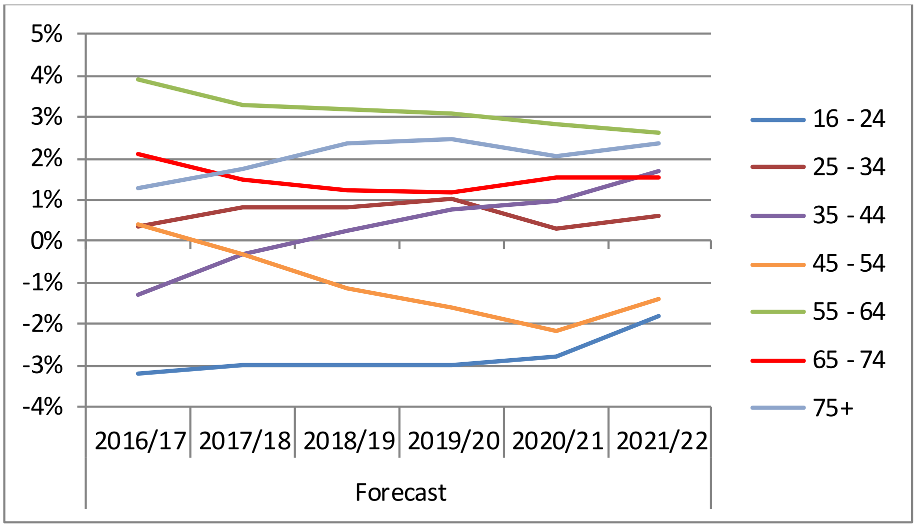
Scottish Government Model

3.5 The Scottish Government's income tax model has four main stages. First, the number of taxpayers are forecast by age group; second, income growth is forecast separately by source (mainly from employment and pensions) and by sector (private and public). These are then combined with the tax parameters to create a static forecast of NSND liabilities before adjustments are made for any behavioural effects and for any changes affecting the tax base not covered by the model.

3.6 The number of taxpayers is forecast by age group, Chart A shows the growth in taxpayers over the forecast period for Scotland. The forecasts are based on ONS population projections, employment forecasts and historic labour market participation trends. The growth in the 65+ age groups shown in Chart A is exclusively driven by projected population growth.

[1] For modelling purposes, the SG forecasters have assumed the upper limit of this proposal, and the increase each year in the forecasts is in line with forecasts for September CPI inflation. The Scottish Government's income tax policy was set out in March 2016 (link)

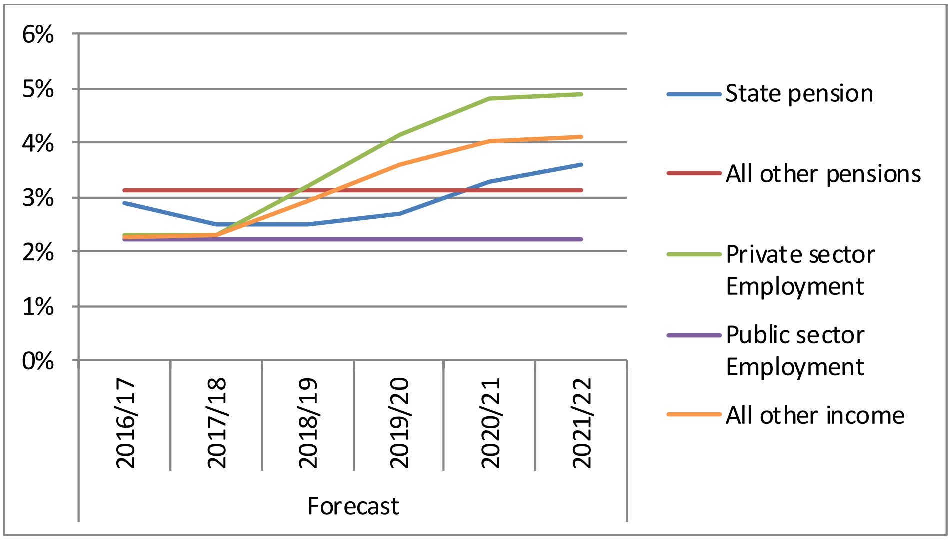
Chart A: Annual growth of Scottish income tax payers, by age group



Source: Scottish Government analysis

3.7 The model uses data from HM Revenue and Customs (HMRC) Survey of Personal Incomes (SPI), an annual sample of HMRC records for individuals who could be liable for UK income tax. The latest data are from 2013-14 and identify income from employment, pensions and other sources. The model uses forecasts of growth for each of these different income types, which is summarised in Chart B. The overall earnings growth forecast is set out in Table C.

Chart B: Forecast income growth rates, by source of income



Source: Scottish Government analysis

Behavioural effects

3.8 It is possible that taxpayers may take action to reduce their overall tax liability. For example, upon hearing of a planned change to their income tax payments, individuals may choose to work fewer hours or change how they are paid so that they can pay less tax.

3.9 These “behavioural effects” need to be accounted for in the forecast, and the SG assumes the scope for such behavioural responses by basic and higher rate taxpayers is small. This reflects the view that these individuals receive almost all of their income from employment and therefore have few options for reducing their tax liabilities by, for example receiving their income from another source. The forecast does assume a greater risk of behavioural responses from additional rate taxpayers: it allows for their declared income to respond more to policy announcements than basic and higher ratepayers.

3.10 The evidence base in Scotland to inform these judgements is limited. It will be important to keep under review the SFC's understanding of these issues and to consider whether evidence exists or may be generated that might shed further light on these issues that will be useful in a Scotland-specific setting.

Final adjustments

3.11 Other factors which may affect the tax base are examined.

3.12 For example, there has been an upward trend in the number of individuals “incorporating” (setting up as a business, rather than being an employee). Profits and dividends are taxed at a lower rate than income, so when individuals incorporate, their tax bill will generally fall and the government will lose revenue[2]. This impacts on the NSND income tax forecasts, and so the final adjustments made by the SG take account of this.

Potential risks to the forecasts

3.13 As with any forecast, there are uncertainties around the key assumptions: should earnings or employment growth evolve differently from the central projection then the tax revenues raised may differ from the forecast. Box A in the main report considers these sensitivities in further detail and concludes that changes in either of the paths of average earnings and employment from the forecast would impact on revenues raised.

3.14 The Commission will undertake future work which will pursue further economic modelling of the Scottish labour market that could help provide earnings projections and provide an additional source of information on earnings and employment trends in the Scottish labour market.

[2] See OBR (2016) Box 4.1 for more information. (link)

3.15 The model used by the SG involves forecasting income tax revenue from different age groups (e.g. under 25s, 26-35 year olds etc.).The underlying data does not track individuals over time so there is a risk that it will not pick up factors that affect one age group over their whole lifetime, unless it affects all age groups – so-called cohort effects.

3.16 For example, individuals currently aged in their 40s have some of the highest earnings relative to those from previous generations at the same age. This could be driven by, for example, more female participation in the labour market and higher average education levels. If it is these effects that are driving higher earnings, then they will also apply to the (same) individuals who will be in their 50s in ten years' time, but not those currently in their 50s. Currently, the model only takes account of increasing participation rates and does not account for potentially increasing incomes amongst cohorts. Scottish Government analysts presented evidence that the employment effects are greater than the income effects over the five year forecast horizon presented here.

3.17 The Commission will continue to monitor these potential effects in future.

Comparison between Scottish Government and OBR forecasts

3.18 The differences between OBR and Scottish Government forecasts (shown in Table B) reflect differences in the policy assumptions underpinning the forecasts as well as a different modelling approach.

Table B: Scottish Government and OBR Income Tax forecasts for Scotland

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
Income Tax (OBR)	11,768	12,220	12,770	13,432	14,181
Income Tax (SG)	11,829	12,290	12,912	13,647	14,559

Source: OBR (November 2016) Devolved taxes forecast (link)

3.19 The OBR forecasts are based on announced UK Government policy, the higher rate threshold increases to £45,000 in 2017-18 and thereafter it increases in line with September CPI inflation reaching £48,440 by 2020-21. The OBR forecasts therefore do not fully reflect the Conservative party manifesto commitment to increase the higher rate threshold to £50,000 by the end of the UK Parliament. The Scottish Government forecasts assume the higher rate threshold increases in line with CPI inflation from 2017-18 onwards.

3.20 The OBR's methodology estimates whole UK NSND income tax liabilities and then applies a "Scottish share", based on the proportion of total UK income tax that was raised in Scotland from the 2013-14 Survey of Personal Incomes with some adjustments to account for the impact of tax policy changes and other Scotland specific effects.

3.21 The OBR forecast that the UK employment growth rate will increase from 0.1% in 2017-18 to peak at around 0.5% in 2019-20, with average UK earnings growth picking up to 3.8% by 2021-22. The Scottish Government forecast annual employment growth ranging from 0.0% to 0.5%. The Scottish Government uses the OBR earnings forecasts and their macroeconomic forecasting model to produce a forecast path for annual earnings; the results are similar to the OBR's. Table C compares the forecasts for employment and earnings growth underpinning the income tax forecasts by the Scottish Government and the OBR.

Table C: OBR and Scottish Government estimates of earnings and labour market performance to 2021-22

(%)

	2017-18	2018-19	2019-20	2020-21	2021-22
Growth in UK employment (16+) (OBR) [(1)]	0.1	0.2	0.5	0.4	0.4
Average UK earnings growth (OBR) [(2)]	2.4	3.0	3.4	3.7	3.8
Growth in Scottish employment (SG)	0.3	0.2	0.3	0.0	0.5
Average Scottish earnings growth (SG)	2.3	2.9	3.6	4.1	4.1

Sources:

[(1)] OBR (November 2016) Economic and Fiscal Outlook Supplementary Economy Table 1.6: Growth LFS Employment, all aged 16 and over

[(2)] OBR (November 2016) Economic and Fiscal Outlook Supplementary Economy Table 1.6: Average earnings growth: wages and salaries divided by employees.

4. Land and Buildings Transactions Tax (LBTT)

4.1 Land and Buildings Transactions Tax is a tax on the purchase of residential and commercial property and land in Scotland[3]. The forecasting of LBTT is divided into residential and non-residential components, which are forecast separately. Revenues from the Additional Dwelling Supplement are also forecast separately.

The Residential Model

4.2 The Scottish Government's forecasts for residential LBTT are shown in Table D, below. **The Commission considers these forecasts to be reasonable.**

Table D: Scottish Government forecasts for residential LBTT Revenues

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
Residential LBTT	211	235	251	265	280

4.3 The residential forecasting model has three main stages. The first two stages involve using historical data to forecast house prices and the number of transactions. Finally these forecasts are combined and then the relevant tax rates are applied.

4.4 The Scottish Government's forecast methodology has evolved as a result of the challenge meetings; all inputs of the model are now estimated using statistical models. This has produced lower forecasts for increases in prices and transactions than was forecast last year and this in turn feeds into lower LBTT forecasts.

4.5 Average house prices are forecast based on historical trends in the data series, accounting for 'one-off' events which could influence the forecast including the financial crisis in 2008-09 and episodes of forestalling.[4] Chart C shows the growth rate of mean house prices since 2004, and the Scottish Government's central forecast for mean prices. The forecast for mean house price growth is between 1% and 2% from 2017-18 until the end of the forecast period. Median house prices are modelled relative to mean prices.[5]

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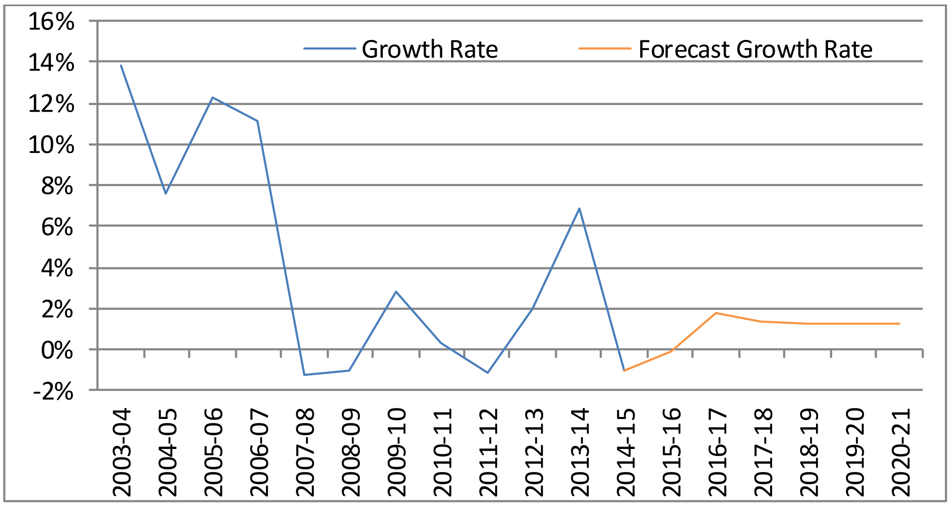
[3] This also includes commercial leases. See Revenue Scotland (link) for more information on LBTT.

[4] When a tax change is pre-announced (as with the introduction of LBTT and ADS) individuals have the opportunity to change their behaviour to minimise their tax bill. For example, those buying additional homes had a financial incentive to complete the purchase before the introduction of the 3% ADS liability. This will lead to an increase in transactions in the months running up to the introduction of this tax, and a reduction in transactions immediately following the tax, relative to what otherwise would have happened.

[5] The forecast methodologies are different, however: mean prices are forecast using an ARIMA model, whereas the median-mean ratio is forecast using a stationary autoregressive model.

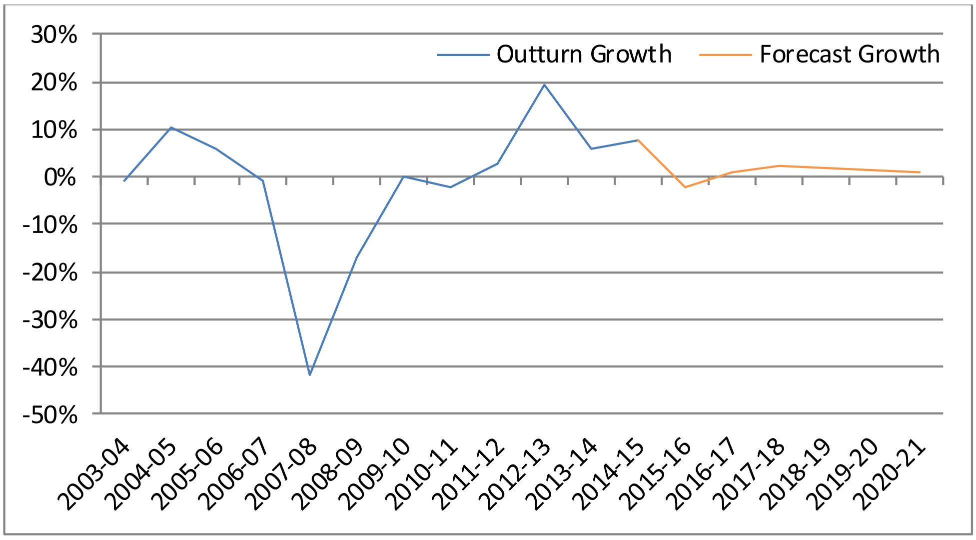
These forecasts of mean and median house prices are then used to model the house price distribution. [6]

Chart C: Outturn and forecast growth in mean house prices in Scotland



Notes to chart: SFC analysis based on data from Registers of Scotland and Scottish Government forecasts

Chart D: Outturn and forecast growth in house sales in Scotland



Notes to chart: SFC analysis based on data from Registers of Scotland and Scottish Government forecasts

4.6 The next component of the residential LBTT forecast is growth in the number of transactions. The Scottish Government model the turnover ratio (the proportion of the private housing stock sold in each period) and this is then used to generate a forecast of transactions, shown in Chart D. Residential

[6] The house price distribution is assumed to be log-normal, which can be characterised by the median and mean parameters.

transactions were heavily affected by the financial crisis and the forecast methodology takes account of this. There is also a noticeable drop in growth between the latest outturn year (2015-16) and the current year; this is due to forestalling effects from the introduction of ADS as transactions were brought forward into 2015-16. There is evidence to suggest some underlying weakness in the market at present.

4.7 The third stage combines these forecasts to generate a forecast of the number of future transactions and the estimated selling prices before the relevant tax rates are applied to generate the revenue forecast. An adjustment is then applied to the distribution of revenues across price bands, reflecting how the underlying housing market model does not appear to fit quite so well to the £325k-750k price bracket as it does for other price brackets.

4.8 Overall, the Scottish Government's forecast for residential LBTT revenues is lower than for last year's Draft Budget, reflecting weakness in recent outturn data and methodological developments.

Potential risks to the forecasts

4.9 As with any forecast, there are uncertainties around the key assumptions: for example how transactions growth will evolve and how different segments of the market perform. Should these differ from the central projections, then the tax revenues raised may differ from the forecast. Furthermore, the residential housing market may be subject to shocks which are not implicit in these trends and which will impact on outturn revenues.

4.10 The Commission has previously identified revenues in the £325k-£750k price bracket as being lower relative to the forecast in the underlying model. Box D in the main report explores the extent to which local conditions in the Aberdeen housing market, given the slump in its dominant industry, may have been responsible for the differences between forecasts and revenues. Whilst this analysis is illustrative given the lack of regional LBTT data, it suggests that the performance of the housing market in the Aberdeen area could potentially account for a significant part of the difference. The Commission will continue to monitor this as outturn data become available.

4.11 Looking ahead, as the Commission becomes responsible for the production of LBTT forecasts it will continue to monitor developments in housing and other markets to inform future developments in forecasting. Moreover, the experience in scrutinising the residential LBTT forecast and outturn data highlights the need to understand how different sectors of the market are performing, and that understanding should be deepened wherever possible.

Comparison between Scottish Government and OBR forecasts

4.12 The OBR use SDLT transactions in Scotland in 2013-14 as the basis for their model, substantial adjustments are applied accounting for policy changes since then. The OBR then assumes that Scottish prices and transactions grow in line with their UK forecasts from 2015-16 onwards. Therefore, a key difference between the Scottish Government and OBR forecasts for residential LBTT will come from differences in forecasts for residential prices and transactions growth. This is outlined in Table E.

Table E: Scottish Government and OBR forecasts for residential price and transactions growth

(%)

	2017-18	2018-19	2019-20	2020-21	2021-22
OBR UK transactions growth	6.3	3.4	2.3	2.4	1.3
OBR UK property price growth	3.6	4.3	4.7	4.7	4.8
SG transactions growth	0.8	2.4	1.9	1.5	1.2
SG property price growth (mean)	1.8	1.4	1.3	1.3	1.3

Source: OBR Economic and Fiscal Outlook November 2016 Table 4.1 Residential property prices and transactions.

4.13 The OBR revenue forecasts in Table F are increasing over the forecast period, which the OBR attribute to higher growth in prices, growth in transactions and the increasing effective tax rate (as house price growth pulls more transactions into higher tax bands over time).

Table F: Scottish Government and OBR residential LBTT Forecasts

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
OBR Residential LBTT	235	274	316	366	416
SG Residential LBTT	211	235	251	265	280

Source: OBR (November 2016) Devolved taxes forecast (link) and (link)

Additional Dwelling Supplement (ADS)

4.14 ADS is a supplement paid by anyone purchasing an additional residential property, such as a second home or a buy-to-let investment. ADS is applied to additional properties worth £40k or more, and is a flat rate tax of 3% of the total value. People who buy a new primary residence before they have sold their current residence (and therefore temporarily own two premises), have 18 months in which to reclaim their ADS. The original LBTT tax return offers taxpayers the option to indicate their intention to do so; to date 34% of ADS revenues are associated with an intention to reclaim.[7] This assumption is a key driver of the forecast, and the Commission will monitor this closely as more data becomes available on the reclaim rate for ADS.

4.15 Table G details the final SG forecasts for ADS. **The Commission considers these forecasts to be reasonable**.

Table G: Scottish Government forecasts for ADS Revenues

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
ADS	72	75	78	80	82

4.16 The forecasts for Draft Budget 2017-18 are based on estimates of the number of ADS transactions which will not be refunded. The model uses transactions occurring in July to September this year which have not indicated an intention to reclaim, in order to create a baseline level of ADS transactions. This excludes the first quarter where the effect of forestalling is likely to be greatest, preventing the impact of forestalling[8] from driving future forecasts. Current indications are that ADS transactions constitute around 16% of total residential transactions.

4.17 To forecast prices, the Scottish Government assumes the mean purchase price is around 10% lower than for the wider housing market. Analysis of initial outturn data suggests this is a realistic assumption and it is therefore maintained throughout the forecast period. The average price and volume of ADS transactions are assumed to grow at the same rate as prices and transactions in the wider housing market (see Table E). Going forward, the Commission will continue to monitor outturn data to understand if these assumptions remain valid.

4.18 Relative to the ADS forecast in Draft Budget 2016-17, this year's ADS forecast is higher throughout the forecast period. This upward revision is driven by observed outturn data for 2016-17 which suggest that the initial

[7] Data provided by Revenue Scotland.
[8] Forestalling is, by its nature, expected to be temporary.

estimate of the tax base was too low. At the same time, the subsequent growth in ADS each year is forecast to be slower than previously forecast as a result of the economic determinants for residential LBTT (which also drive the ADS forecast) being more subdued in Draft Budget 2017-18.

Potential risks to the forecasts

4.19 As with the main residential LBTT forecast, there are uncertainties around the key assumptions of price and transaction growth. In addition the extent to which homeowners will seek to reclaim their initial ADS tax liabilities will affect the final outturn revenues. The SFC will continue to closely monitor this.

Comparison between Scottish Government and OBR forecasts

4.20 The OBR assumes that 25% of all ADS received by the Scottish Government will be refunded (18% within the first year after an additional property is purchased and 7% in the following 6 months). The Scottish Government's estimate for the refund rate is more conservative, at 34%, and is based on the proportion of revenues where buyers have indicated their intention to reclaim. This, along with the OBR using UK forecasts of prices and transactions, drives the difference between the SG and OBR forecasts for ADS revenues in Scotland.

Table H: Scottish Government and OBR ADS Forecasts

(£ million)

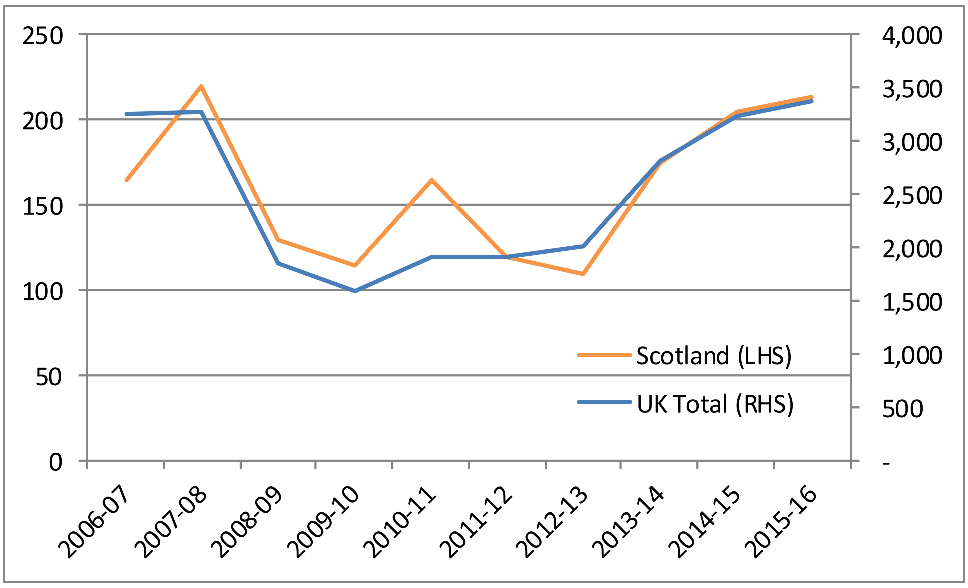
	2017-18	2018-19	2019-20	2020-21	2021-22
OBR	105	113	121	130	138
SG	72	75	78	80	82

Source: OBR (November 2016) Devolved taxes forecast (link) and (link)

The Non-Residential Model

4.21 The non-residential market in Scotland does not appear to operate in any significantly different way from the market in the rest of the UK. For example, as Chart E shows, Stamp Duty Land Tax (SDLT) and LBTT revenues in Scotland and the UK have moved in very similar ways historically. The methodology for non-residential LBTT differs from the residential forecast discussed above, in that it utilises UK-wide forecasts from the OBR.

Chart E: Non-Residential SDLT and LBTT revenues, Scotland and UK



Note to chart: Source – HMRC (link) and Revenue Scotland (link)

4.22 The SG's forecasts of non-residential LBTT revenues are provided in Table I. **The Commission considers these forecasts to be reasonable**.

Table I: Scottish Government forecasts for Non-Residential LBTT revenues

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
Revenue	224	233	242	252	262

4.23 The model starts with a "base" level of revenue, which is calculated by taking the average from the last three years.[9] Table J shows how the outturn data for 2013-14 to 2015-16 are used to calculate a "base" revenue figure for 2016-17.

[9] The average revenue from the last three years is used so that any year where revenue was unusually high or low (due to one or two large transactions, for example) is not allowed to unduly impact on the "base" level of revenue. The three years are adjusted for inflation of property prices before being averaged.

4.24 The model then assumes Scottish price and transaction trends match those of the overall UK market over the forecast period. The base figure shown in Table J is then grown based on the combined effect of transactions and price growth shown in Table K to generate a revenue forecast for LBTT in 2016-17 and subsequent years.

Table J: Calculation of "base" year revenue

(£ million)

	Outturn			3- year “base”
	2013-14	2014-15	2015-16	
Revenue	175	205	217	226

Note to table:
The outturn figures reported above are adjusted by property price inflation before being averaged to generate the 3 year “base” reported here.

Table K: Forecast changes to average prices and transaction volumes

(%)

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Average Price growth	-5.1	-3.2	2.1	1.8	1.9	2.0
Transactions growth	6.7	1.3	1.9	2.1	2.1	2.0
Growth in revenue	1.3	-1.9	4.0	3.9	4.0	4.0

Sources: Scottish Government analysis; price and transactions forecasts are from OBR Economic and Fiscal Outlook Table 4.1.

4.25 From April 2017 the Commission will have responsibility for the non-residential LBTT forecasts. As part of this process the Commission will explore the possibility of utilising more Scotland-specific microeconomic data in forecasting non-residential LBTT. However, such a task may be complicated by taxpayer confidentiality issues and the volatility inherent in the non-residential property market in Scotland. Furthermore, the Commission will look to deepen its understanding of how in-year data can be used to improve the forecast (e.g. data published in 2017-18 could be used to inform the 2018-19 forecast).

Comparison between Scottish Government and OBR forecasts

4.26 For non-residential LBTT the OBR also forecast transactions and prices to grow at the same rate in Scotland and the UK as a whole from 2016-17 onwards. The forecasts are outlined in Table L. However, the OBR use in-year data to create a base to which this growth is applied, whereas the Scottish Government have used an average of recent years to smooth out some of the known volatility in the non-residential market. This is the driver of the majority of the difference between Scottish Government and OBR forecasts for non-residential LBTT.

Table L: Scottish Government and OBR forecasts for non-residential LBTT revenues

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
OBR	199	209	219	230	242
SG	224	233	242	252	262

Source: OBR (November 2016) Devolved taxes forecast (link)

5. Scottish Landfill Tax (SLfT)

5.1 Landfill Tax is a tax on the disposal of waste to landfill. In the 2017-18 tax year there are two tax rates, depending on the type of waste landfilled – the Standard Rate (£86.10 per tonne) and a Lower Rate (£2.70 per tonne) applying to certain materials such as naturally occurring rocks and soils.[10]

5.2 The Scottish Government's forecasts are shown in Table M. **The Commission considers these forecasts to be reasonable**.

Table M: Scottish Government forecasts for Scottish Landfill Tax revenues

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
SLfT Revenue	149	118	109	112	106

5.3 The forecasts assume tax rates in Scotland match pre-announced UK Government rates in 2017-18 and 2018-19, and then increase by RPI inflation each year, matching the UK Government's announced policy.

5.4 Last year's forecast methodology assumed that the Scottish Government's targets for a reduction in landfill waste would be achieved by 2025. The Commission's report last year raised concerns over this target-based approach and the outturn figures for 2015-16 (which did not show a reduction in waste relative to the previous years) raised further concerns for the Commission.

5.5 Following discussions in the challenge meetings, the Scottish Government has reviewed its approach to forecasting SLfT. The approach to forecasting the amount of landfilled waste (in tonnages) is driven by two important elements. First, that the levels of both types of waste remain constant each year, and second, that there is an increase in incinerator capacity which reduces waste sent to landfill.

5.6 The baseline level of waste is calculated using 2016-17 in-year outturn data published by Revenue Scotland to estimate how many tonnes of waste will be landfilled in future years. Chart F shows estimated tonnes of Standard and Lower Rated waste over the forecast period.

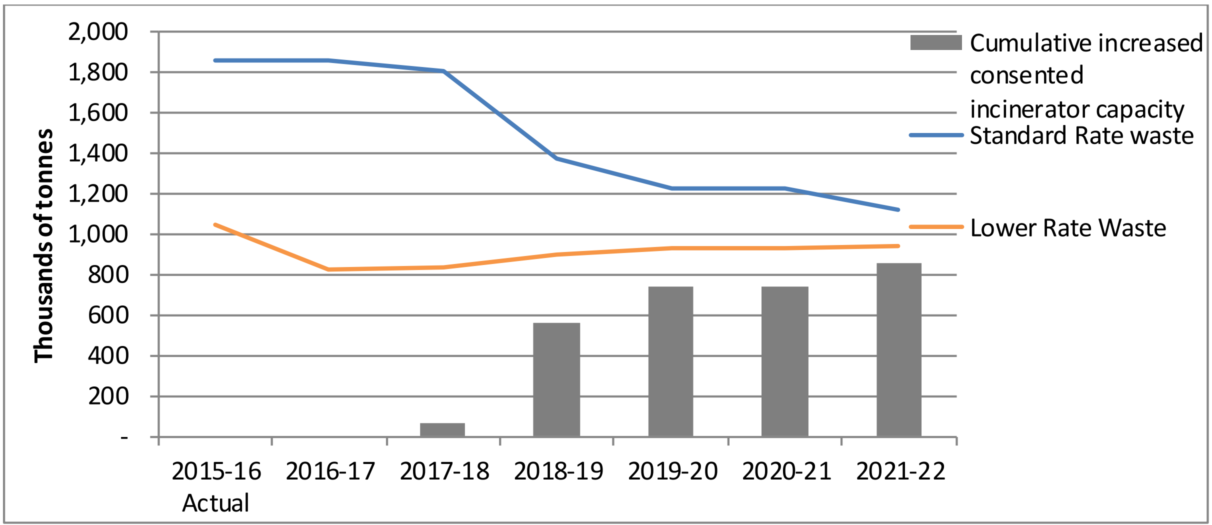
5.7 The model then takes account of the assumed reduction to landfill waste from some incinerators which are currently in development across Scotland. Increasing incinerator capacity means that less waste has to be landfilled and

[10] See Revenue Scotland (2016) "SLfT2003 – Qualifying material for the lower rate" for more information on what qualifies for the lower rate of SLfT (link)

this reduced volume will lead to lower revenues from SLfT. The Scottish Government has worked closely with experts in organisations such as Zero Waste Scotland and SEPA to gain an understanding of progress in this area.

5.8 The first incinerator is assumed to be operational from 2017-18. The effect can be seen in the estimates for the total tonnage of Standard Rated landfill waste in each year of the forecast period in Chart F. Incineration of waste leads to residue (ash), some of which will be landfilled as Lower Rated Waste, explaining the slight increase in forecast Lower Rated waste. A small proportion of ash is also landfilled at Standard Rate.

Chart F: Actual and forecast Standard and Lower Rate waste tonnages



Source: Scottish Government analysis

5.9 The relevant tax rates are then applied to these forecast tonnages to produce revenue forecasts, with a final adjustment for the assumed payment to the Scottish Landfill Communities Fund (SLCF).

5.10 Tax credits are available to landfill operators who voluntarily contribute a capped proportion of their SLfT liability to the SLCF.[11] Contributions to the SLCF are assumed to reduce revenue by 5.6% for each year of the forecast horizon.

Potential risks to the forecasts

5.11 Whilst the Commission considers the forecasts to be reasonable, there are always risks which may lead to SLfT revenues not matching the forecast.

5.12 There is a ban on Biodegradable Municipal Waste being sent to landfill from January 2021. The Scottish Government does not yet have sufficient

[11] More information can be found on the Revenue Scotland website (link) and (link)

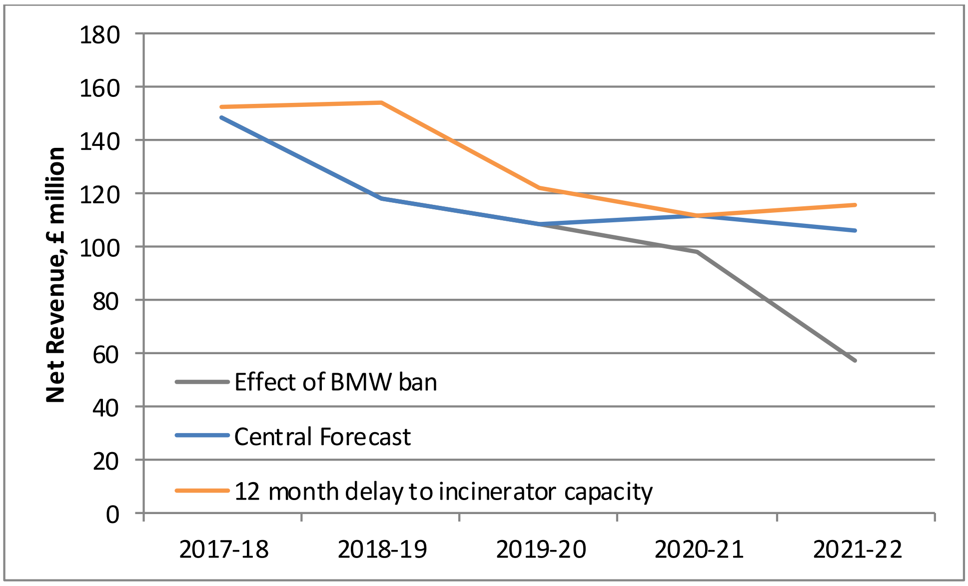
information as to how the ban will impact on the quantity of landfilled waste as Local Authorities and waste management companies are responsible for putting in place their own arrangements ahead of the ban. The central forecast does not, therefore, currently make any adjustment for this ban.

5.13 The Commission notes that there is little pre-treatment in Scotland just now due to the lack of current incinerator capacity, which has limited the ability to add it to the model. Examples of pre-treatment include sorting waste to remove recyclable waste and drying out waste to make it easier to incinerate. Quantifying this in future years will be important: if pre-treatment reduces the amount of waste sent to landfill this will reduce expected revenue from SLfT.

5.14 The model does not consider exporting waste, which could divert more waste from landfill, and so this is another downside risk to the central SLfT forecast.

5.15 If the incinerators fail to come on stream when planned, this is likely to increase the amount of waste sent to landfill, leading to higher than forecast SLfT revenues. The Scottish Government have provided sensitivity analysis exploring the impact on the forecast if all the incinerators were delayed by 12 months, and the effect of the ban on Biodegradable Municipal Waste going to landfill. Both of these are presented in Chart G.

Chart G: Sensitivity analysis: changes to revenue forecast



Source: Scottish Government analysis

5.16 When the Commission assumes responsibility for producing the forecasts for SLfT in April 2017 it will monitor developments against these risks and underlying assumptions closely.

Comparison between Scottish Government and OBR forecasts

5.17 The OBR use Revenue Scotland data on current receipts from SLfT and then project these forward based on their assumed growth in UK receipts to generate a Scottish forecast. The UK forecast from 2017-18 onwards reflects increases in incinerator capacity in England.

Table N: Scottish Government and OBR forecasts for SLfT

(£ million)

	2017-18	2018-19	2019-20	2020-21	2021-22
OBR	134	118	110	105	103
SG	149	118	109	112	106

Source: OBR (November 2016) Devolved taxes forecast (link)

6. Non-Domestic Rates Income (NDRi)

6.1 Non Domestic Rates (NDR) is an annual tax paid by the owner, tenant or occupier of non-domestic properties.[12] The Commission's current remit in respect of NDR is to assess the reasonableness of the "economic determinants" underpinning the wider forecast of NDR income. These economic determinants are: the change in the total rateable value (RV) of properties in Scotland (from new builds, extensions etc.) net of revaluation appeal reductions; and inflation. The net change in RV is known as `buoyancy' and can be thought of as the change in the tax base, and inflation is normally used to uprate the tax rate. [13]

6.2 Non-domestic properties are typically re-valued every five years. This involves each property being given a new value by the independent Scottish Assessors. Owners, tenants or occupiers can appeal this valuation. These revaluation appeals do not affect the buoyancy calculation. Alternatively, if there is a material change of circumstance for example, a "running roll appeal" can be lodged.

6.3 A regular pattern can be observed in annual buoyancy data – with buoyancy typically higher in earlier years of a revaluation cycle and lower in later years. The Scottish Government has provided evidence which supports the theory that the administration of the tax system – and in particular the timing of the resolution of running roll appeals – causes this pattern to occur.

6.4 The Scottish Government have also explored any links between economic variables (such as GDP, effective interest rates and employment etc.) and buoyancy. To date this work has not found any clear links. As a result, the buoyancy forecast uses the long run average for buoyancy, applying a cyclical adjustment to account for the pattern described above.

6.5 The Scottish Government uses inflation forecasts from the OBR.

6.6 **The Commission considers the forecasts for both buoyancy and inflation to be reasonable**. These are shown in Table O, below.

6.7 Large scale, high value development projects can have an impact on buoyancy. If one or more such projects completes in a given year, buoyancy is expected to be higher than the cyclical adjustment would allow for, and will likely provide an upside risk to the forecast. Similarly, if a large development is

[12] Subject to statutory exemptions
[13] This is a working assumption only - the decision on the level of poundage (or the tax rate) is for Scottish Ministers, subject to parliamentary approval.

demolished, this can act as a downside risk to the central forecast. The Scottish Government has engaged with the Scottish Assessors Association to monitor such developments. The Commission will continue this work in future.

Table O: NDR Buoyancy and Inflation Forecasts

(%)

Financial Year	2017-18	2018-19	2019-20	2020-21	2021-22
Assumed year of 2017 Revaluation Cycle [1]	1	2	3	4	5
Buoyancy Forecast [1]	1.7	1.8	1.1	0.9	1.0
Inflation Forecast [2]	2.0	3.2	3.5	2.0	2.0

Notes to table:

[1] Scottish Government analysis

[2] Inflation forecasts are based on OBR forecasts for September of the previous financial year. September 2016 RPI, which is used in the 2017-18 forecast, is known. For the period up to 2019-20 RPI inflation is used, 2020-21 onwards uses CPI inflation.

6.8 From April 2017 the Scottish Fiscal Commission will become responsible for the production of forecasts of receipts from Non-Domestic Rates; at this point the Commission will consider all aspects of the data, methodology and assumptions underpinning forecasts of Non-Domestic Rates Income.

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