CPPR

Centre for Public Policy for Regions

CPPR Briefing Note

ANALYSIS OF SCOTLAND'S PAST AND FUTURE FISCAL POSITION

Incorporating:
GERS 2014 and the 2014 UK Budget

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Executive Summary

This Briefing Note uses a variety of recently released UK and Scottish Government related documents to review Scotland's future fiscal balance (ie, Scotland's public sector revenues minus its expenditures) both in absolute terms as well as relative to the UK.

Scotland's Fiscal Balance excluding Oil & Gas

Scotland's onshore fiscal balance has been in deficit over the period 2008-09 to 2012-13, by between 13-17% of GDP. As such, Scotland has a noticeably higher fiscal deficit than the UK, by around an extra 5% to 6% of GDP (see Table 1).

Due in main to the fiscal austerity measures currently being proposed by the UK coalition government, Scotland's future onshore deficit is projected to decline but the gap, relative to the UK, is not (see Table 2).

Scotland's Fiscal Balance including Oil & Gas

GERS continues to use the estimates for Scotland's geographical share of these North Sea revenues made by Professors Kemp & Stephens (K&S) of Aberdeen University. CPPR has used both the K&S shares as well as those made by the UK HMRC, which are slightly lower.

Relative to the UK, Scotland's position can be calculated (i) as a share (%) of output (GDP) and (ii) on a per head of population basis.

The latest GERS projections show that, using either measure, Scotland's fiscal advantage over the UK achieved in 2011-12 disappears by 2012-13, as oil revenues fall by over 40%. Instead a sizeable disadvantage emerges (see Table 3). Thereafter, using OBR forecasts from the UK's Budget 2014, CPPR estimates that this relative UK advantage continues to grow (see Table 4).

We already know that total UK North Sea revenues, the main variable element in these calculations, are likely to have fallen again, to around £5 billion, in 2013-14. This means that the figure derived for 2013-14 is more of an out-turn estimate rather than a projection produced for the years 2014-15 and beyond.

Fiscal balance under various price and production scenarios

A year ago the Scottish Government outlined four additional North Sea revenue scenarios to those made by the OBR. These were based on varying oil prices and production levels, each of which result in higher North Sea tax revenue projections than those of the OBR. These forecasts are now out of date and the lower than expected out-turn North Sea tax revenue data for both 2012-13 and 2013-14 show them to be skewed in an optimistic manner.

It would need currently unforeseen improvements in North Sea production and/or the oil price before Scotland's fiscal balance reverted to being better than the UK's. This is primarily due to the considerable fall in North Sea production seen over the past four years.

Conclusions and recommended further work

From the latest OBR forecasts we can conclude that relative to the UK, Scotland would be, significantly worse off over the period 2013-14 to 2018-19. In 2015-16, for example, Scotland's relatively higher deficit would amount to almost £1,000 per head. However, OBR make no forward assumptions over what might happen to the Barnett formula or to Scottish finances so it is not possible to be certain whether the fiscal position under independence would be better or worse than that within the existing United Kingdom.

To help further the referendum debate, it is recommended that the Scottish Government issues an updated version of its Oil and Gas Bulletin, given it is now over a year out of date. It would also be useful if the UK Government, or the OBR, or the Scottish Government estimated the impact of different price and production assumptions on future North Sea revenues. This would allow for a greater understanding of the volatility surrounding North Sea tax revenues and so the extent to which the OBR's figures are a useful guide for future planning of the Scottish Budget.

Finally, we recommend that the Scottish and UK Governments publish a reconciliation of the HMRC and the K&S differences over Scotland's share of North Sea tax revenues.

1. Introduction

This Briefing Note considers the linked implications of data contained in a number of recent UK and Scottish Government publications on Scotland's future fiscal balance.

The fiscal balance is the net financial position of the government after gross expenditure is taken away from gross revenues, i.e. if gross revenues are greater than gross expenditure then there is a fiscal surplus, if expenditure is greater than revenues then there is a net deficit.

The publications of interest are:

- the latest (2014) edition of the 'Government Expenditure and Revenues for Scotland' (GERS);
- the latest Economic and Fiscal Outlook (EFO) by the Office for Budget Responsibility (OBR) that supports the UK Government's 2014 Budget Report; and
- the Scottish Government's 'Oil and Gas Analytical Bulletin' (OGAB) from 2013.

The Note considers:

a) Scotland's fiscal balance excluding oil and gas revenues, i.e., its onshore fiscal balance;

b) The impact on Scotland's fiscal balance of adding in potential North Sea related, offshore, oil and gas tax revenues;

c) How these fiscal balances have changed: in the years covered by the latest GERS report, from 2008-09 to 2012-13; in 2013-14, for which much of the data is now close to out-turn; and for the projected period, 2014-15 to 2018-19, based on the latest OBR forecasts.

d) For the period 2014-15 to 2018-19 we also consider how relevant the Scottish Government's oil and gas scenarios, from a full year ago, remain.

Throughout, this note concentrates on Scotland's overall fiscal balance (i.e. including capital expenditure) for the UK and Scotland rather than the current balance, as the former reflects better the international measure that is typically used in this area of analysis. However, Annex 2 also discusses the potential impact of Scotland's relatively higher capital spend on Scotland's future fiscal position.

When looking at Scotland's fiscal balance including North Sea tax revenues, the note concentrates on using Scotland's geographic share, as this is the share most commonly used by commentators.

Finally, all calculations shown assume that the Barnett formula will continue in essentially its current form, at least until 2018-19. To date, no UK political party has expressed any intention to amend it prior to that date, beyond the adjustments necessary to incorporate the Scotland Bill changes.

2. Scotland's Fiscal Balance excluding Oil & Gas

2.1 Historic position 2008-9 to 2012-13

Scotland's onshore net fiscal balance (i.e. excluding the North Sea oil and gas region) is in deficit, something that Scottish Government figures show has been the case as far back as comparable data stretches, ie, to 1980. GERS 2014 shows that for the financial years 2008-09 to 2012-13, this deficit amounted to between 13%-17% of GDP. As such, Scotland has a noticeably higher fiscal deficit than the UK, by around an extra 5%-6% of GDP in each year over this period.

Table 1, along with subsequent tables, shows the fiscal balance for Scotland (i) in £ billion, cash terms, (ii) as a % of GDP and, (iii) per head of population[1]. The latter two measures allow for a clearer comparison of the relative size of these balances with respect to the UK and this is made explicit in the rows which illustrate the degree to which Scotland's fiscal deficit is higher/lower than the UK's.

Table 1: Net Onshore Fiscal Balance, Scotland and the UK, 2008-09 to 2012-13

	2008-09	2009-10	2010-11	2011-12	2012-13
£ billion (cash terms)					
Scotland	-15.7	-20.0	-19.8	-18.6	-17.6
UK	-112	-163	-148	-129	-121
% GDP					
Scotland	-13.2	-17.2	-16.1	-14.7	-14.0
UK	-7.9	-11.6	-10.0	-8.5	-7.8
Scotland minus UK	-5.3	-5.6	-6.1	-6.2	-6.2
£ per head (cash terms)					
Scotland	-3,030	-3,860	-3,790	-3,500	-3,320
UK	-1,810	-2,620	-2,350	-2,030	-1,900
Scotland minus UK	-1,220	-1,240	-1,440	-1,470	-1,420
Cumulative difference, £billion	-6.3	-6.4	-7.5	-7.8	-7.6

Source: GERS 2014; CPPR

** Note - the impact of the one-off £28 billion adjustment to Royal Mail pension fund has been excluded from 2012-13 in this and all following tables, in order to present a clearer and more consistent, cross-year, comparison. This is also the case with Asset Purchase Facility (APF) dividend receipts.*

The cause of Scotland's relative deficit versus the UK is that while Scotland's contribution to onshore UK revenues are a little below its population share (8.2% vs its 8.4% share of the UK population), its share of public sector expenditure (9.3%) is well above its population share. This relative fiscal deficit position has been a consistent feature across the period (see Table 1).

Scotland's relative position, both in terms of % of GDP and £ per head, worsened over the period 2008-09 to 2010-11. GERS shows that this was the result of a worsening of Scotland's share of some major taxes over this period, including, income tax, onshore corporation tax, other taxes on income and wealth, VAT and the gross operating surplus.

[1] The Scottish Government calculates a deficit per head figure in a different way to CPPR. Annex 2 expands on this and explains why we prefer to use a different methodology.

In cash terms, this higher onshore deficit is equivalent to between £6.3 billion to £7.8 billion over this period, or around £1,200 to £1,500 per person.

2.2 Estimate for financial year 2013-14 and projections to 2018-19 using the latest OBR forecasts

Even as the absolute deficit of both countries continues to decline, this relative onshore Scotland-UK position is not expected to change much in the current spending review period (i.e. to 2018-19).

Table 2 shows:

- CPPR's estimate of the position in 2013-14, for which much of the data is already available;
- CPPR's future projections of the onshore fiscal balance for Scotland and the UK to 2018-19 (see Annex 1 for more details on the methodology used for making these projections).

Table 2: Net Onshore Fiscal Balance, Scotland and the UK, 2013-14 to 2018-19

	2013-14 estimate	***2014-15 forecast***	***2015-16 forecast***	***2016-17 forecast***	***2017-18 forecast***	***2018-19 forecast***
£ billion (cash terms)						
Scotland	-17.1	*-16.2*	*-14.7*	*-12.2*	*-10.0*	*-8.4*
UK	-113	*-99*	*-79*	*-48*	*-20*	*1*
% GDP						
Scotland	-12.9	*-11.6*	*-10.1*	*-8.0*	*-6.3*	*-5.1*
UK	-6.9	*-5.8*	*-4.5*	*-2.6*	*-1.0*	*0.1*
Scotland minus UK	-6.0	*-5.8*	*-5.6*	*-5.4*	*-5.3*	*-5.2*
£ per head (cash terms)						
Scotland	-3,210	*-3,020*	*-2,730*	*-2,260*	*-1,850*	*-1,550*
UK	-1,750	*-1,540*	*-1,220*	*-730*	*-300*	*20*
Scotland minus UK	-1,460	*-1,480*	*-1,510*	*-1,530*	*-1,550*	*-1,570*
Cumulative difference, £ billion (cash terms)	-7.7	*-8.0*	*-8.1*	*-8.3*	*-8.4*	*-8.5*

Source: OBR EFO March 2014, CPPR calculations

Table 2 shows that, as the UK comes into near fiscal balance, by 2018-19:

- Scotland continues to have a significant absolute onshore deficit.
- Across the full time-period, Scotland's relative position continues to be worse than the UK's.
- The increase in the relative Scotland versus UK difference, in per head of population terms, is because Scotland receives an above population share of the UK's rising expenditure over this period.
- However, on a % of GDP basis, the differential narrows over the forecast period, from 6% to around 5%. This is due to the fact that while the UK's deficit as a share of GDP shrinks at a faster rate, since Scotland's deficit starts at around twice the UK size (ie, 12% versus 6%), the respective declines of each results in a slight narrowing of the relative gap.

3. Scotland's Fiscal Balance including North Sea oil & gas revenues

3.1 Historic position 2008-9 to 2012-13

Scotland's overall net fiscal balance changes dramatically once a geographic share of North Sea oil and gas revenues is added in to the equation.

Figures for both Scotland and the UK shown in Table 3 include North Sea tax revenues. While GERS uses only the Kemp & Stephens (K&S) assessment of Scotland's geographic share we have also used those made by HMRC, which produces a range of outcomes (See Box 3.1in GERS 2012-13 for more details). The HMRC estimates of Scotland's geographic share are lower than those of K&S. For 2012-13, for example, the HMRC share was 79%, while the K&S share was 84%.

As the reasons for the differences between the HMRC and the K&S shares are not well understood we have no view on which is the more accurate. However, as the UK Statistics Authority recently commented, more work is clearly needed in this area in order to reach a mutually agreed share.

Table 3 illustrates the position up to 2012-13, based on GERS 2014 data but with additional estimates derived using the HMRC's Scottish geographic shares of North Sea tax revenues.

Table 3: Total Net Fiscal Balance, Scotland and the UK, 2008-09 to 2012-13

	2008-09	2009-10	2010-11	2011-12	2012-13[2]
£ billion (cash terms)					
Scotland - K&S	-4.1	-14.4	-12.3	-8.6	-12.1
Scotland - HMRC	-5.2	-14.8	-12.6	-9.2	-12.4
UK	-99	-157	-139	-117	-115
% GDP					
Scotland - K&S	-2.9	-10.7	-8.5	-5.8	-8.3
Scotland - HMRC	-3.6	-11.0	-8.7	-6.2	-8.6
UK	-6.9	-11.0	-9.3	-7.6	-7.3
Scotland minus UK - K&S	4.0	0.3	0.8	1.8	-1.0
Scotland minus UK - HMRC	3.3	0.0	0.6	1.4	-1.3
£ per head (cash terms)					
Scotland - K&S	-790	-2,760	-2,360	-1,610	-2,270
Scotland - HMRC	-1,000	-2,850	-2,410	-1,730	-2,330
UK	-1,610	-2,530	-2,220	-1,850	-1,800
Scotland minus UK - K&S	820	-240	-140	240	-470
Scotland minus UK - HMRC	610	-320	-190	120	-530
Cumulative difference - K&S (£bn)	4.2	-1.2	-0.7	1.3	-2.5
Cumulative difference - HMRC (£bn)	3.1	-1.6	-1.0	0.7	-2.8

Source: GERS 2014, CPPR

[2] Figures for 2012-13 are consistent with the latest GERS publication. However, the OBR's latest EFO reduced UK North Sea revenues by £0.4 billion. If GERS figures were subsequently adjusted Scotland's fiscal position would further worsen, both absolutely and relatively. Similar adjustments in previous years have occurred caused by HMRC receiving updated estimates of how companies distribute group CT payments between upstream (ie. offshore) and downstream (ie. onshore) activities. OBR has incorporated part of this reduction, £0.2 billion, into their forecasts.

In absolute terms, Scotland, like the UK, still has a large net deficit in each year. Moreover, in 2012-13 its fiscal balance worsened significantly compared to 2011-12, from a deficit of around -£9 billion to one over -£12.1 billion (depending on whether the K&S or HMRC share is used).

This worsening balance had been expected (and forecast by CPPR in previous publications) since the deterioration in North Sea revenues has been known about for some time; total North Sea tax revenues fell from £11.3 billion in 2011-12 to £6.6 billion in 2012-13.

Relative to the UK, Scotland had a higher fiscal deficit than the UK in 2012-13 both as a % of GDP and on a per head of population basis. This contrasts with 2011-12 when, under both measures, Scotland was in a relatively better position.

Over the 5 years shown in GERS 2014, Scotland had a similar annual average deficit to the UK.

3.2 Estimate for financial year 2013-14 and projections to 2018-19 using the latest OBR forecasts

Table 4 shows:

- CPPR's estimate of the fiscal position in 2013-14, given we know UK revenue and expenditure totals and have a very good idea of the estimates for UK North Sea oil revenues for this year ;
- CPPR's projections of the total fiscal balance for Scotland and the UK to 2018-19 (see Annex 1 for more details on the methodology used for making these projections).

Table 4: Total Net Fiscal Balance, Scotland and the UK, 2013-14 to 2018-19

	2013-14 estimate	***2014-15 forecast***	***2015-16 forecast***	***2016-17 forecast***	***2017-18 forecast***	***2018-19 forecast***
£ billion (cash terms)						
Scotland - K&S	-13.0	*-12.9*	*-11.3*	*-9.4*	*-7.0*	*-5.3*
Scotland - HMRC	-13.2	*-13.2*	*-11.5*	*-9.6*	*-7.2*	*-5.5*
UK	-108	*-96*	*-75*	*-44*	*-17*	*+5*
% GDP						
Scotland - K&S	-8.6	*-8.2*	*-6.9*	*-5.5*	*-4.0*	*-2.9*
Scotland - HMRC	-8.7	*-8.3*	*-7.1*	*-5.6*	*-4.1*	*-3.0*
UK	-6.6	*-5.5*	*-4.2*	*-2.4*	*-0.8*	*0.2*
Scotland minus UK - K&S	-2.0	*-2.7*	*-2.7*	*-3.1*	*-3.2*	*-3.1*
Scotland minus UK - HMRC	-2.1	*-2.8*	*-2.9*	*-3.2*	*-3.3*	*-3.2*
£ per head (cash terms)						
Scotland - K&S	-2,430	*-2,420*	*-2,110*	*-1,740*	*-1,290*	*-980*
Scotland - HMRC	-2,480	*-2,460*	*-2,150*	*-1,770*	*-1,330*	*-1,020*
UK	-1,680	*-1,480*	*-1,160*	*-680*	*-250*	*70*
Scotland minus UK – K&S	-750	*-940*	*-950*	*-1,060*	*-1,040*	*-1,050*
Scotland minus UK - HMRC	-800	*-980*	*-990*	*-1,090*	*-1,080*	*-1,090*
Cumulative difference – K&S (£bn)	-4.0	*-5.0*	*-5.1*	*-5.7*	*-5.6*	*-5.7*
Cumulative difference – HMRC (£bn)	-4.3	*-5.2*	*-5.3*	*-5.9*	*-5.8*	*-5.9*

Source: OBR EFO March 2014, CPPR calculations

Based on the latest independent forecasts by the OBR, Scotland's absolute deficit, like the UK's, improves over time. This is not surprising given the fiscal austerity measures that have been in place since 2010-11.

However, relative to the UK, the Scottish position continues to worsen, through to 2016-17, flattening off thereafter. This is true both as a % of GDP terms and in terms of per head of population. The principal reason for this profile is the continued fall in North Sea revenues projected to 2016-17, declining from £4.7 billion in 2013-14 to near £3.2 billion in 2016-17.

The sums involved are not insignificant. In 2013-14, for which we have a good idea of what the data will turn out to be, the difference amounts to over £750 per person. Over the forecast period 2014-15 to 2018-19, Scotland's relatively poorer performance stands at an annual average of around 3% of GDP or £1,000 per person.

3.3 Projections to 2018-19 under alternative oil tax scenarios

The projections shown in Table 4 are by no means the only possible outcomes. In particular, the relative fiscal position between Scotland and the UK in the future will shift depending on the fortunes of the North Sea.

North Sea-related revenues depend on a number of key variables, including:

- the oil (in dollars) and gas price
- the £/$ exchange rate
- oil and gas production levels
- the tax regime, including investment and decommissioning allowances
- production and maintenance costs, and hence profitability per £ of output

In March 2013, the Scottish Government outlined five scenarios for oil prices and production that would result in cumulative North Sea tax revenue projections ranging from £41.5 billion (nominal prices) under Scenario 2 to £57.1 billion (nominal prices) under Scenario 5 (see Box 1).

Box 1

Scottish Government illustrative North Sea tax revenue scenarios for 2012-13 and 2017-18

Scenarios:

1 OBR UK Autumn Statement 2012 assumption on oil prices and production levels

2 Scenario 1 PLUS flat cash terms future oil price assumptions

3 Scenario 2 PLUS Oil & Gas UK production estimates

4 Scenario 3 LESS an allowance for lower profitability of extra production

5 Scenario 3 PLUS DECC central price forecasts

Source: Scottish Government, 2013 Oil and Gas Analytical Bulletin

The Scottish Government's Scenario 1 used the OBR's forecast from the 2012 Autumn Statement as the lowest variant, despite the fact that OBR had consistently over-estimated North Sea revenues since it was established in 2010. All four of the Scottish Government's other scenarios resulted in higher tax revenues than those forecast by OBR.

We now know that, for 2012-13, all 5 scenarios overestimated outturn Scottish offshore revenues, which were around £5.5 billion (although now revised down to £5 billion in the latest OBR EFO) versus a Scottish Government range of £6.7 to £7.2 billion. Furthermore, the outturn for 2013-14, for which we have data for 11 of the 12 months, is now expected to be below £5 billion. This contrasts with a Scottish Government estimate for 2013-14 ranging between £6.2 and 8.3 billion.

These 2012-13 and 2013-14 out-turns for North Sea tax revenues highlight why the Scottish Government's use of the OBR forecasts as a lower limit, rather than a more central estimate, for future offshore revenues is problematic.

Beyond 2013-14, North Sea tax revenue estimates are highly dependent on the underlying assumptions used in relation to the key variables outlined above. OBR currently assumes: a slowly falling oil price, in $ and cash terms; a flat oil production profile from 2014-15 onwards; and high capital expenditure for the next couple of years. This converts to a gradually declining North Sea tax revenue profile, with the occasional, small, rise, due to the impact of tax relief on investments.

While the OBR's future oil price assumptions are lower than DECC's central oil projection, they are not extreme outliers. For example, forecasts for Brent crude in 2015 (in dollars per barrel) by the OBR, the US Energy Information Administration (EIA) and the Norwegian Government are $102, $101 and $90, respectively.

Equally, on production, while Oil & Gas UK forecasts remain higher than the OBR's (and DECC's) they have been revised down in each of their last two relevant publications.

Changes to underlying Scottish Government assumptions

The Scottish Government has not updated its original Scottish North Sea tax revenue estimates since March 2013, despite revisions to all the underlying assumptions.

At the time of publication of the original scenarios the Scottish Government said that "Further updates will be published in due course". Given the multiple revisions since then, it is unclear why no such update has been forthcoming in over a year.

Table 5: changes to Scottish Government oil scenario assumptions

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Oil price ($ per barrel, cash terms)						
Scottish Government Scenario 5	115	119	122	125	129	133
Latest comparable	112	110	113	116	120	124
Difference	-3	-9	-9	-9	-9	-9
Production (Million barrels per day)						
Scottish Government Scenario 5	1.6	1.5	1.7	1.85	1.95	2.0
Latest comparable	1.56	1.43	1.45	1.5	1.6	1.7
Difference	-0.04	-0.07	-0.25	-0.35	-0.35	-0.3
North Sea tax revenues (£ billion, cash terms)						
Scottish Government Scenario 5	7.2	8.3	9.4	9.7	10.7	11.8
Latest comparable	4.2	4.1	?	?	?	?
Difference	-3.0	-4.2				

Sources: Price: DECC central estimate, October 2012 and July 2013 (calendar years); Production: Oil & Gas UK Activity Survey, Feb 2013 and Feb 2014 (calendar years); Revenues: Scottish Government Oil and Gas Analytical Bulletin 2013, HMRC.

Table 5 highlights the difference between current data and what was being assumed a year ago for North Sea tax revenues, prices and production levels.

In 2013-14, North Sea tax revenues are only half the level estimated in the Scottish Governments scenario 5.

This is due in part to both oil prices and production being lower than expected. However, a significant degree of the difference can be accounted for by lower taxable profits. The degree to which this relates to higher investment, which can be written off against profits, or to which it relates to higher costs of production, which may permanently reduce future profit margins, is not possible to ascertain from publicly available data.

Post 2013-14, the updated price and production assumptions are all lower than previously predicted, although it is likely to be the future assumption for taxable profits that will be crucial in terms of any bounce back in North Sea tax revenues. At the time of the 2014 Budget, the OBR assumes no such bounce back in the next few years but there are small, against trend, increases seen in 2017-18 and 2018-19.

Overall, the conclusion must be that if the Scottish Government were to use the same general assumptions as a year ago, but to update them for the latest projections available, then each of its five future scenarios would result in lower North Sea tax revenue estimates.

4. Conclusions and Recommendations

Conclusions

- The fiscal projections in this Briefing Note imply that Scotland will face a difficult period of adjustment in moving away from high, to more manageable, fiscal deficits. The UK faces a similar challenge.
- The variability of oil prices and North Sea production levels means that the fiscal deficit projections shown in this paper should be read as indicative only.
- Notwithstanding this caveat, from the latest OBR forecasts we can conclude that Scotland would be, in relative terms, significantly worse off than the UK over the period 2013-14 to 2018-19. However, as OBR make no forward assumptions over what might happen to the Barnett formula or to Scottish finances then we cannot be certain whether the fiscal position under independence would be better or worse than that within the existing United Kingdom.

Recommendations

- The Scottish Government should issue an updated version of its Oil and Gas Bulletin, which is now over a year out of date.
- It would also be useful in the referendum debate if both it and the UK Government, or the OBR, estimated the impact of different assumptions on price, production and profitability on future North Sea revenues. This would allow for a greater understanding of the range of change or changes in the assumptions over future levels needed for the OBR's numbers to significantly shift.
- Furthermore, we recommend that the Scottish and UK Government's publish a reconciliation of the HMRC and the K&S differences over Scotland's share of North Sea tax revenues.

Annex 1

Details on data and calculations for all tables

UK: 2008-9 to 2012-13

- UK government revenue, expenditure (TME), GDP (including North Sea) and North Sea revenue totals all taken from GERS 2014
- population taken from PESA, Annex 1
- North Sea GDP derived from latest Scottish government SNAP publications using Table B from GVA publication and Scottish shares from Table 4 from Oil and Gas publication

UK: 2013-14 to 2018-19

- UK government revenue, expenditure (TME), GDP (including North Sea) and North Sea revenue totals all taken from OBR's Economic and Fiscal Outlook at the time of the UK Government's 2014 Budget
- population derived from ONS population projections for 2017 (November 2013)
- North Sea GDP estimated by CPPR as constant at its 2012-13 level. This is an approximation. OBR's projections of declining cash price and lower production in 2013-14 suggest that North Sea GDP may fall slightly over the period.

Scotland: 2008-09 to 2012-13

- all Scottish government revenue, expenditure and GDP data taken from Government Expenditure and Revenue Statement (GERS) 2014
- population taken from PESA, Annex 1

Scotland: 2012-13 to 2018-19

- Scottish Government revenue total calculated as a constant share (8.2%) of UK revenues (excluding North Sea revenues)
- Scottish Government expenditure total calculated as a constant share (9.3%) of UK expenditure
- GDP (excluding North Sea) calculated using same growth rate as for UK GDP (including North Sea)
- GDP (including North Sea) estimated by adding on a constant share (83%) of UK North Sea GDP
- North Sea revenue calculated as constant share of both the K&S (88%) and HMRC (82%) of UK total from 2013-14 onwards
- population derived from GROS population projections for 2017 (from November 2013).

Shares

Scotland's share of UK on-shore revenues, expenditures and North Sea revenue used for projections post 2012-13 are an average of the actual % shares for the period 2008-09 to 2012-13. Over the period these shares varied marginally and so a central estimate is assumed to be a reasonable guide to future shares.

Annex 2

Relative fiscal deficit per head of population

CPPR's estimate of how much higher or lower Scotland's fiscal deficit per head of population has been compared to the UK differs from that used in Scottish Government releases.

CPPR's figures are derived from dividing the total fiscal deficit by the population, then subtracting the UK figure from Scotland's. In 2012-13, this leads to a figure of between -£470 and -£530 per head (depending on which geographic share is used, K&S or HMRC).

The Scottish government makes a similar calculation, but starts with the relative (Scotland versus the UK) deficit as a % of GDP, multiplies the resulting difference by Scottish GDP, and then divides by the Scottish population. This more indirect method gives a figure of -£276 for 2012-13.

The variation in results is caused by Scotland's GDP being bigger than the UK's, in per head of population terms. However, much of this difference is due to Scotland's high share of North Sea GDP, most of which is foreign owned, and which results in Scotland's wealth, when looked at in terms of GDP, being exaggerated.

Over the five year period from 2008-09 to 2012-13 similar calculations give a cumulative difference of between -£310 and +£210 per head using CPPR's methodology (depending on the North Sea geographic share) and nearly +£1,600 per head using the Scottish Government's.

Scotland's higher relative spend on capital

The Scottish Government has highlighted that Scotland's higher deficit in 2012-13, relative to the UK, was due in large part to higher capital spend and that this would, in the long run, improve Scotland's fiscal balance, through faster economic growth.

This may be true to some degree but without analysis of what this extra expenditure was being spent on it is difficult to judge how much extra growth, if any, would result.

For example, the extra capital spending went to a variety of areas such as enterprise and economic development, housing and community development, health, recreation, culture and religion. The increased economic and growth potential arising through each of these areas is not immediately clear and merits additional analysis.