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Taxation, government spending and the public finances of Scotland: updating the medium term outlook

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Executive Summary

Public spending in Scotland

- Total public spending for the benefit of Scotland amounted to £65.2 billion in 2012–13, or £12,265 per person. This was 11.5% higher than per capita spending across the UK as a whole, which stood at £10,998. This is similar to the difference observed in 2011–12.
- Spending on benefits and tax credits is similar per person in Scotland to the average across Great Britain, although the distribution of this spending is somewhat different. More is spent in Scotland on disability-related benefits, while less is spent on housing benefit.
- For some large areas of public service spending – notably health and education – spending per person is also similar in Scotland to the UK average. However, in other areas – such as enterprise and economic development, and housing – the Scottish government spends considerably more per person than is spent across the UK as a whole.
- The Scottish government chooses to spend relatively more on investment, rather than current, spending than the UK government does as a whole. In part this reflects the fact that the service areas that receive relatively greater funding in Scotland are relatively capital intensive. But also a greater fraction of the budget in most service areas is spent on capital (i.e. investment items) rather than current (i.e. day-to-day) spending.

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Taxation in Scotland

- Onshore revenues in Scotland totalled £47.6 billion in 2012–13, or £8,952 per person. This was slightly lower than the £9,109 per person raised across the UK as a whole. This gap is similar to the gap in 2011–12.
- More is raised per person in Scotland than across the UK as a whole from indirect taxes – in particular, duties on gambling, alcohol, and tobacco. Less is raised per person in Scotland from income tax, capital gains tax, inheritance tax, and stamp duties.
- Offshore oil and gas production contributed £6.6 billion to the UK Exchequer in 2012–13, lower than the £11.3 billion raised in 2011–12.
- If these offshore revenues are allocated between Scotland and the rest of the UK on a geographic basis, Scotland is estimated to have received £5.6 billion in 2012–13, or £1,050 per person.

The medium term picture for Scottish public finances

- Scotland's offshore revenue in 2012–13 was not quite sufficient to outweigh the higher level of public spending per person in Scotland in that year. As a result, Scotland is estimated to have had a weaker fiscal position in that year than the UK as a whole: Scotland's net fiscal deficit is estimated to have been 8.3% of GDP, compared to 7.3% for the UK. This is in contrast to 2011–12 when Scotland's net fiscal deficit was smaller than for the UK.
- The Office for Budget Responsibility (OBR) forecasts that revenues from offshore oil and gas production will decline further over the next few years. If this turns out to be the case, Scotland's fiscal position would not strengthen as quickly as the UK's.
- Using the OBR's forecasts for the UK as a whole and assuming a population share of debt is allocated to an independent Scotland, we estimate that Scotland's net fiscal deficit would decline from 8.3% of GDP in 2012–13 to 2.9% by 2018–19, assuming that the government of a newly independent Scotland continued to implement the spending cuts pencilled in by George Osborne for 2016–17, 2017–18 and 2018–19. However, by the same date the UK as a whole is projected to achieve a net fiscal surplus of 0.2% of GDP.
- The medium-term outlook for an independent Scotland is sensitive to a number of factors – not least the revenues that might be received from

offshore oil and gas production and the quantity of existing UK debt that an independent Scotland would be required to service. If offshore revenues were to come in more in line with some of the scenarios outlined recently by the Scottish government and/or if Scotland were to inherit a smaller share of UK debt, Scotland's fiscal position would be stronger.

- Looking further forward, Scotland is likely to face greater fiscal challenges than the UK, as a result of the likely decline in revenues from offshore oil and gas production as these resources are depleted.

1. Introduction

The potential consequences of independence for taxation, public services, and the welfare system in Scotland are a key battleground in the ongoing campaigning ahead of the independence referendum this September. In order to shed light on these issues, over the course of 2012 and 2013, the IFS published a series of reports analysing particular areas:

'Scottish independence: the fiscal context', P. Johnson and D. Phillips (November 2012)

'*Government spend on benefits and state pensions in Scotland: current patterns and future issues*', D. Phillips (July 2013)

'*Public service spending in Scotland: current patterns and future issues*', B. Deaner and D. Phillips (September 2013)

'*Taxing an independent Scotland*', S. Adam, P. Johnson and B. Roantree (October 2013)

'*Fiscal sustainability of an independent Scotland*', M. Amior, R. Crawford and G. Tetlow (November 2013)

This report provides a summary of the key findings of these papers, including the medium-term outlook for Scotland's public finances.[2] In doing this, it also

[2] '*Fiscal sustainability of an independent Scotland*', M. Amior, R. Crawford and G. Tetlow (2013), also looked at the longer-term fiscal outlook for Scotland. This showed that the precise fiscal outlook, while uncertain, depends upon, among other things: future North Sea production; future levels of migration; future levels of productivity growth; and the level of debt Scotland inherits and the interest rate when servicing that debt. However, in all scenarios examined, the scale of spending cuts and/or tax rises required in an independent Scotland would be larger than for the UK as a whole (although the magnitude of the difference depends upon the scenario). There has been no significant new information that suggests the broad picture has changed, and therefore we do not update this longer-term outlook in this report.

updates the figures to take into account the latest data on taxation and spending contained in the Scottish government's latest *Government Expenditure and Revenues Scotland* (GERS) publication covering 2012–13[3]; and updated forecasts from the Office for Budget Responsibility's (OBR) March 2014 *Economic and Fiscal Outlook*.

The precise numbers have changed somewhat, but the main findings of our earlier work still hold when we use the most recent data:

- Public spending per person, especially on public services (as opposed to benefits) is substantially higher in Scotland than in the rest of the United Kingdom.
- Taxes generated onshore are, if anything, slightly lower per person than in the rest of the UK.
- While in the recent past revenues from the North Sea have usually been enough to close the gap between spending and onshore revenues, this was not the case in 2012–13 and (according to the OBR's forecasts) declines in oil revenues will mean this will also not be the case in the coming years.
- Taken together, the OBR's forecasts imply that, in the medium term, an independent Scotland's public finances would be in a substantially weaker position than those of the UK, unless it were to undertake further spending cuts or tax rises on top of those already pencilled in for the coming years.
- Even if oil revenues do rebound in the medium-term, this does not necessarily mean that tax rises or spending cuts can be avoided forever. An independent Scotland would perhaps want to use any bounce back in oil revenues to reduce debt levels and prepare for the longer-term challenges of population-ageing and the inevitable eventual decline of North Sea revenues.

These findings provide the fiscal context to the current Scottish government's priorities for tax and spending in an independent Scotland as set out in their White Paper.[4] These are discussed in a companion Briefing Note.[5]

[3] Initial analysis of the latest GERS figures was published in March as an IFS observation: '*Scotland's fiscal position worsened in 2012–13 as North Sea revenues fell*', D. Phillips

[4] 'Scotland's Future – your guide to an independent Scotland', Scottish Government, November 2013, available at: http://www.scotreferendum.com/reports/scotlands-future-your-guide-to-an-independent-scotland/.

The rest of this report proceeds as follows. In Section 2 we analyse spending on public services and benefits in Scotland, highlighting those areas of spending which explain the overall higher government expenditure in Scotland, while Section 3 looks at how much tax is raised in Scotland, and from which taxes. Section 4 puts the spending and taxation side together to look at the health of Scotland's public finances, both in the most recent year of data (2012–13) and over the medium term to 2016–17 (potentially the first year of an independent Scotland) and 2018–19. Section 5 concludes.

Because our earlier findings still largely stand, readers wanting more information on a particular topic (e.g. how the pattern of welfare spending has changed over time; or detailed information on how Scotland may want to redesign its tax system) may wish to consult our earlier (more comprehensive) reports, listed above. Where our earlier work seems particularly relevant, we provide references to specific pages in these reports. An appendix to this report also provides a reconciliation with our earlier work based on the 2011–12 version of GERS.

2. Public spending in Scotland

Under current constitutional arrangements, whilst a large part of public expenditure in Scotland is undertaken by the Scottish government and Scottish local government, certain areas – including defence, foreign affairs, and benefits and tax credits – are 'reserved matters' and are the responsibility of the UK government. Thus, to obtain a full understanding of public spending undertaken for the benefit of the people of Scotland, one has to include not only spending undertaken by the Scottish government and local government, but also estimate spending by the UK government for the benefit of people living in Scotland.

Doing this, the Scottish government's GERS publication estimates that total managed expenditure (TME) for the benefit of Scotland was £65.2 billion in 2012–13, the latest year for which data are available. This was approximately 9.3% of the UK-wide figure for TME of £701.7 billion, higher than Scotland's 8.4% share of the UK population. This means that estimated TME per person in Scotland (£12,265) was 11.5% higher than the figure for the UK as a whole (£10,998). This relatively higher spending in Scotland is a long-term

[5] D. Phillips and G. Tetlow (2014), "Policies for an independent Scotland? Putting the Independence White Paper in its fiscal context", IFS Briefing Note, BN149 (henceforth D. Phillips and G. Tetlow (2014)).

phenomenon[6], and the gap was fairly stable at between 10% and 12% in the 5 years between 2008–09 and 2012–13.[7] This makes Scotland (along with London) stand out as having relatively high average household income and relatively high government spending.[8]

Another way to consider the relative levels of TME in Scotland and the UK as a whole is to measure TME as a proportion of gross domestic product (GDP): this provides information on the size of the state relative to the economy. In the case of Scotland, a difficulty arises in how output generated from offshore oil and gas production should be allocated between Scotland and the rest of the UK. GERS uses two methods to apportion North Sea output and revenues: a population share (i.e. Scotland is allocated a fraction of North Sea output and revenues equal to its share of the UK population) and a geographic share (i.e. using estimates of the share of North Sea output that would be in Scottish waters if the median-line principle were used to divide up the North Sea on a geographical basis).[9]

Figure 1 shows that the method used makes a substantial difference to Scotland's estimated GDP and thus to the relative magnitude of government spending in Scotland versus the UK as a whole. Assigning a population-based share of North Sea output to Scotland, equal to £2.0 billion in 2012–13, gives an estimate of GDP per capita in Scotland of £24,141, slightly lower than the £24,700 for the UK as a whole. Combined with higher levels of spending per person, on this basis, TME is a higher share of GDP in Scotland than for the UK as a whole: 50.8% compared to 44.6% in 2012–13. Allocating a geographical share of North Sea output to Scotland, equal to £18.4 billion in 2012–13, increases Scottish GDP per capita to

[6] The Scottish National Accounts Project shows this to have been the case since at least 1980–81, when that data series begins.

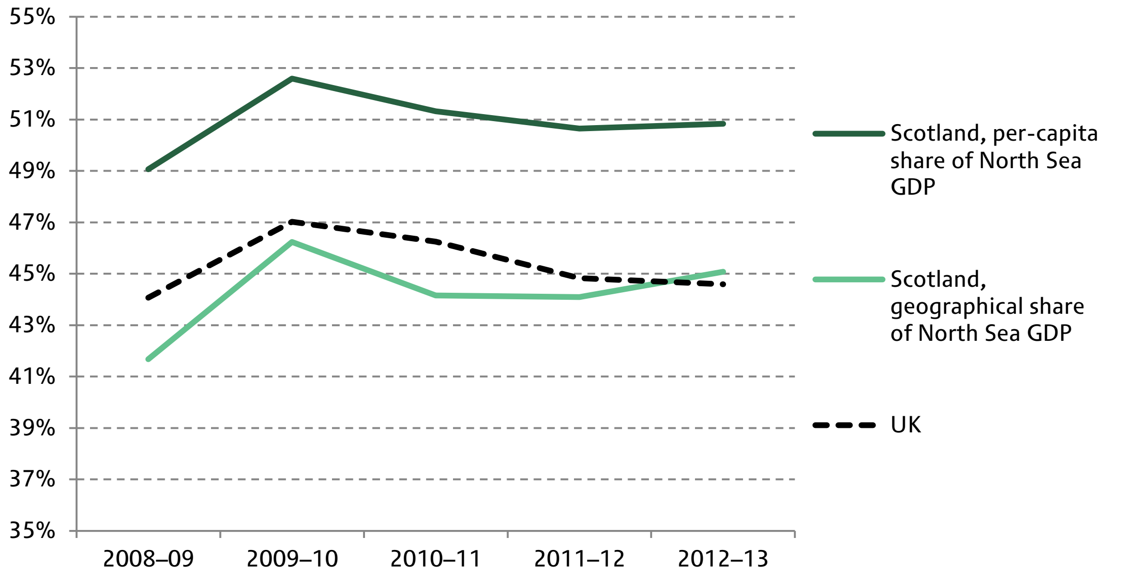
[7] In earlier years, the gap was larger. Historical public spending in Scotland available at: http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/GERS/RelatedAreas/LRfiscalbalances2013.

[8] B. Deaner and D. Phillips, '*Public service spending in Scotland: current patterns and future issues*', 2013, available at: http://www.ifs.org.uk/publications/6902. (henceforth B. Deaner and D. Phillips (2013)).

[9] This divides North Sea revenues and output on a geographical basis according to the location of individual oil and gas fields relative to a boundary that was established in the Scottish Adjacent Waters Boundaries Order 1999.See http://www.legislation.gov.uk/uksi/1999/1126/contents/made. While GERS (and HMRC) use this boundary, note that it is not certain that this is the boundary that would be used if offshore revenues were divided on a geographical basis under independence.

£27,227. On this basis, TME was estimated to be 45.1% of Scottish GDP in 2012–13. This is much closer to the figure for the UK as a whole, but is still slightly higher. In contrast, between 2008–09 and 2011–12, TME was a lower share of GDP in Scotland than in the UK as a whole when allocating North Sea output on a geographic basis.[10] What happens in the future depends upon how much output is generated in the North Sea, the performance of Scotland's onshore economy compared with that of the UK as a whole, and the level of TME in Scotland compared with the rest of the UK. We return to the first and last of these issues later in this Briefing Note.

Figure 1. Estimated total public spending as a percentage of GDP in Scotland and the UK



Source: Figures for total managed expenditure (TME) and GDP taken from GERS 2012–13.

In the remainder of this Briefing Note we focus on figures for revenues and output which allocate Scotland a geographic share of oil and gas production and revenues. Detailed discussion of the main differences between using these geographic allocations and population based allocations is provided in our earlier Briefing Notes and reports.

Breaking TME down into its components

TME can be broken down into a number of different components based on the purpose of the spending. This is done for both Scotland and the UK as a whole in Table 1.

[10] See Figure 2, B. Deaner and D. Phillips (2013), for a longer-term perspective.

The largest item is spending on public services. This type of spending includes both the amount spent on the day-to-day running and administration of services such as health, education and transport, and investment in facilities such as new hospitals, schools and roads. Spending on public services amounted to £40.7 billion in 2012–13 in Scotland, or £7,663 per person. This was £1,205 or 18.6% higher than the amount spent per person across the UK as a whole in the same year. Spending per person on benefits and tax credits was just 1.8% higher in Scotland than across the UK as a whole, while (by definition) per capita spending on debt interest is assumed to be the same. It is important to note, however, that this latter assumption does not mean that an independent Scotland would be required to spend the same amount per person on debt interest. This would depend on the level of debt inherited by an independent Scotland, and the rate of interest it faced on that debt.

Table 1. Breakdown of TME in Scotland and the UK as a whole, 2012–13

	Public services	*Benefits and tax credits*	*Debt interest*	*Accounting adjustment*	*Total*
Scotland					
£ billion	40.7	17.9	4.0	2.6	65.2
£ per person	7,663	3,366	757	486	12,271
% of GDP (geographic share)	28.1%	12.4%	2.8%	1.8%	45.1%
% of GDP (population share)	31.7%	13.9%	3.1%	2.0%	50.8%
UK as a whole					
£ billion	411.5	210.6	48.2	31.4	701.7
£ per person	6,459	3,306	757	492	11,015
% of GDP	26.1%	13.4%	3.1%	2.0%	44.6%
Scotland as % of UK	9.9%	8.5%	8.3%	8.2%	9.3%
Scotland per person as % of UK	118.6%	101.8%	100%	98.6%	11.4%
£ per person difference	1,204	60	0	-7	1,257

Source: TME in Scotland and the whole UK taken from GERS 2012–13. Benefit spending is taken from DWP, HMRC and DSDNI benefit statistics. Public service spending is calculated as a residual (i.e. TME – Benefits – Debt interest – accounting adjustment).

It is therefore clear that it is higher spending on public services per person that drives most of the difference in overall TME per person: spending per person on benefits and tax credits in Scotland is much closer to the average for the UK as a whole.

Public service spending in Scotland

Whilst more is spent on public services per person in Scotland than in the UK as a whole, this higher spending is not spread evenly across different public services. To illustrate this, Tables 2 shows spending per person by service area in Scotland and the UK.

The level of spending per person in Scotland on many of the largest items is fairly similar to that across the UK as a whole. For instance, spending on health is 8.9% higher per person, and education and training 4.5% higher per person – differences considerably smaller than the overall gap of 18.6%.[11]

It is on the smaller items of spending, which are largely the responsibility of the Scottish government, that spending per person in Scotland is proportionally greatest. For instance, spending on enterprise and economic development per person in Scotland was well over twice as high as the UK-wide average.[12] However, there are also two areas where less is spent per person in Scotland: science and technology, and public order and safety.

Together this means the pattern of spending on public services in Scotland is substantially different from the UK as a whole. For instance, for the UK as a whole, spending on education, health, public order and safety, defence and international services together make up 70.4% of all spending on public services. In contrast, for Scotland, the equivalent figure is 62.1%. This reflects the fact that whilst spending per person on public services for the benefit of Scotland was 18.6% higher than the UK average, for these five service areas the difference was only 4.9%. This means spending per person on the remaining areas was 50.6% (£984) higher than the average for the UK as a whole in 2012–13.

[11] One large spending area where Scotland does spend significantly more per person than the UK as a whole does is personal social services. This reflects, in part, the more generous policy of free personal care for the elderly that operates in Scotland. For further discussion see pages 37 to 40, B. Deaner and D. Phillips (2013), for further information.

[12] Our earlier report (B. Deaner and D. Phillips (2013)), based on GERS 2011–12 showed spending on this category to be more than 3 times as high per person than for the UK as a whole. Data revisions in GERS 2012–13 have increased estimated spend in the rest of the UK, however, reducing the gap somewhat.

This pattern of slightly higher-than-average spending per person on health and education, and substantially higher spending on most other devolved services, is similar to the situation in Wales and Northern Ireland.[13] Furthermore, these differences in spending patterns have become much more pronounced over time. Spending on health and education per person increased by less in Scotland during the 2000s than in the UK as a whole, while spending on other areas such as transport and social services grew more rapidly (and has subsequently been cut by less). This suggests that the Scottish government has been able to use its discretion over how to spend its block grant allocation to prioritise service areas differently from the UK government's decisions for England.

Table 2 also shows that Scotland has a different mix of capital spending (i.e. spending on building new schools, hospitals, roads, buying new equipment etc.) and current spending (i.e. spending on day-to-day administration and operation of services) than the UK as a whole. Capital spending is around 50% higher than the average for the UK as a whole, whereas current spending is 15% higher. This means that whereas capital spending made up 11.1% of all public service spending for the UK as a whole in 2012–13, it made up 14.0% of spending in Scotland. Capital spending per person has been consistently higher in Scotland than in the UK as a whole since at least 2002–03, although the difference has grown substantially since 2009–10 as capital spending has been cut by less in Scotland than in the rest of the UK.[14]

The higher share of capital spending in Scotland reflects two things. First, those services on which relatively more is spent in Scotland – such as housing and community amenities, transport, and enterprise and economic development – are more capital-intensive Second, as shown in Figure 2, in most instances a relatively larger share of spending is devoted to capital spending in Scotland even conditional upon service area. The most notable exception to this general pattern is transport. This reflects high current spending on transport in Scotland in the form of subsidies to the railways and to ferry and air services in the Highlands and Islands.[15]

[13] See PESA 2013, table 9.15, for instance.

[14] Section 4, B. Deaner and D. Phillips (2013).

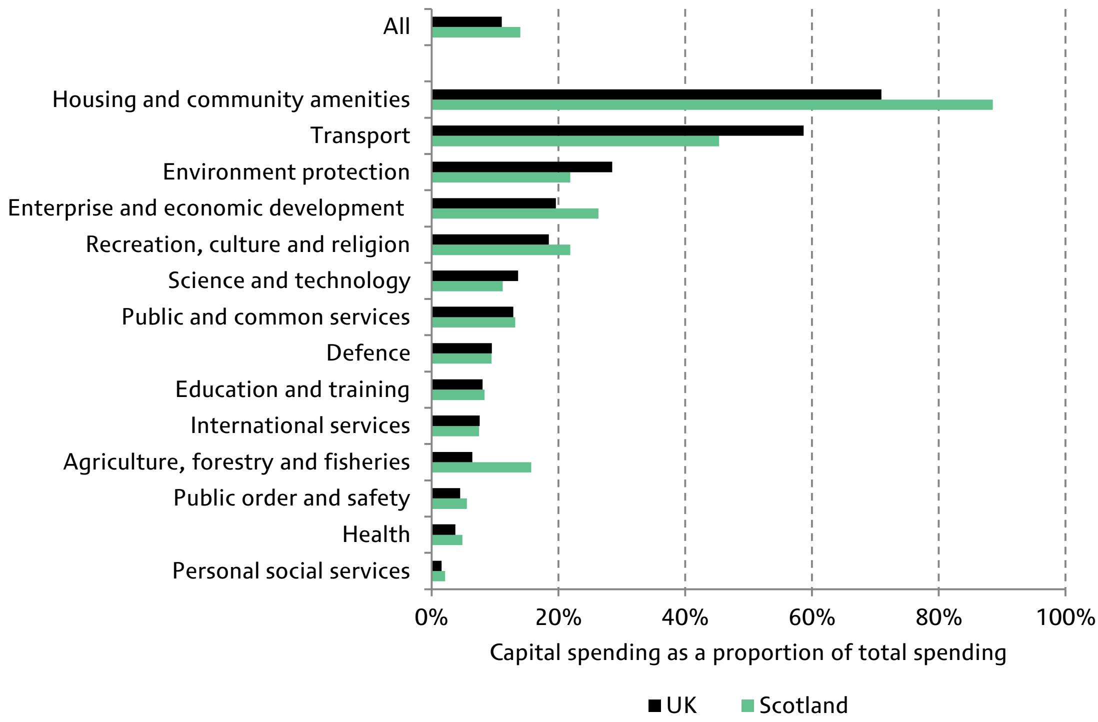
[15] See pages 40 to 42, B. Deaner and D. Phillips (2013).

Table 2. Spending on services, Scotland and the UK as a whole, 2012–13 (£ per person)

Service area	Scotland *Current*	Scotland *Capital*	Scotland *Total*	UK *Current*	UK *Capital*	UK *Total*	*Scotland total as % of UK*	*Per-person total difference*
General public services								
Public and common services	226	34	260	160	24	183	141.8%	77
International services	116	9	126	116	10	126	100.0%	0
Defence	516	54	570	517	54	571	100.0%	0
Public order and safety	449	27	476	472	22	494	96.4%	-18
Economic affairs								
Enterprise and economic development	145	52	197	67	16	83	237.2%	114
Science and technology	42	5	47	49	8	56	83.0%	-10
Employment policies	42	0	42	40	0	40	103.6%	1
Agriculture, forestry and fisheries	145	27	173	78	5	84	205.8%	89
Transport	286	237	523	125	178	304	172.3%	219
Environment protection	178	50	228	125	50	175	130.2%	53
Housing and community amenities	35	271	306	48	117	166	185.1%	141
Health	2020	103	2124	1878	73	1951	108.9%	173
Recreation, culture and religion	228	64	292	164	37	201	145.8%	92
Education and training	1320	120	1440	1262	111	1373	104.9%	67
Personal social services and other non-cash social protection[a]	842	18	861	653	10	643	128.9%	189
Total service expenditure[b]	6549	1073	7621	5696	716	6412	118.6%	1,204

[a] Calculated as a residual by subtracting benefit spending (including council tax benefit) as recorded in DWP benefit statistics from GERS social protection expenditure figures.
[b] Total is for service spending only so does not include debt interest, accounting adjustments or benefits expenditure
Source: GERS 2012–13; DWP benefits statistics (https://www.gov.uk/government/publications/social-security-expenditure-in-the-united-kingdom-including-scotland); authors' calculations.

Figure 2. Proportion of spending accounted for by capital spending, by service area, Scotland and the UK, 2012–13



Source: GERS 2012–13, PESA 2013, DWP benefit statistics, DSDNI resource accounts, HMRC resource accounts and authors' calculations.

Benefit and tax credit spending in Scotland

Adding the tax credit expenditure that GERS counts as negative taxation (rather than spending) gives a figure of total benefit spending in Scotland of £18.1 billion, or £3,407 per person. This is 1.6% higher than the average for the UK.

While total benefit spending per person in Scotland is little different to that in the UK as a whole, the pattern of spending by benefit differs, as shown in Table 3. In particular, spending on disability benefits per person in the population was 19% higher in Scotland (£645) than in the UK as a whole (£540). Spending per person was also a little higher on old-age benefits such as the state pension. On the other hand, spending per person on housing benefit and on child benefits and tax credits was lower than the average for the UK. These patterns are very similar to those in 2011–12 and other recent years.

Our earlier work looked in detail at the factors underlying this different pattern of benefit expenditure.[16] It found that, in part the differences reflect the different

[16] Section 3, D. Phillips, *Government spending on benefits and state pensions in Scotland: current patterns and future issues*, 2013 (henceforth D. Phillips (2013)).

age profile of Scotland: a slightly larger fraction of the population are of pensionable age and a smaller fraction are children than in the UK as a whole. Spending on child benefits and tax credits per child and spending on old-age benefits per person aged 60 or over are very close to the average for the UK.

Table 3. Benefit spending per person in Scotland and the United Kingdom as a whole, 2012–13

	Scotland	*United Kingdom*
Total benefit spending		
£ per person	3,407	3,353
% of Great British average	101.6%	100.0%
By benefit type (£ per person)		
Old-age benefits	1,506	1,450
Disability benefits	645	540
Tax credits and child benefits	640	704
Housing benefits	337	385
Other means-tested benefits	255	252
Other benefits	25	22
Means-tested	1,146	1,235
Non-means-tested	2,262	2,117

Note: 'Old-age benefits' are the state pension, pension credit, concessionary TV licences and winter fuel payments. 'Disability benefits' are attendance allowance, carer's allowance, disability living allowance, employment and support allowance, incapacity benefit, industrial injuries benefit and severe disablement allowance. 'Tax credits and child benefits' are the child and working tax credits, child benefit, maternity allowance and statutory maternity pay. 'Housing benefits' are housing benefit. 'Other means-tested benefits' are income support, jobseeker's allowance and council tax benefit. 'Other benefits' are the remaining benefits, including the small number not broken down by nation (allocated in the same proportion to those benefits for which expenditures are broken down by nation). Employment and support allowance is counted as non-means-tested, and jobseeker's allowance as means-tested, whereas in practice both contain means-tested and non-means-tested elements.
Source: Authors' calculations based on DWP published analysis available at: https://www.gov.uk/government/publications/social-security-expenditure-in-the-united-kingdom-including-scotland.

However, differences in the age structure of the population cannot explain the greater amounts spent on disability benefits: the proportion of the population claiming, and thus the average amount spent, are higher in Scotland at all working-age ages than in the UK as a whole.

Spending on housing benefit is lower in Scotland largely because rents are lower. This reflects both lower private and social sector rents, and a larger fraction of people on housing benefit living in social housing (where rents are lower than in the private sector). However, significant spending by the Scottish government on social housing and other housing initiatives means *total* spending on housing in 2011–12 was higher in Scotland (£597 per person) than in England (£493) or Wales (£471) – and the same is likely to be true of 2012–13 (given the substantial investment in housing described in the previous section). There are clearly questions about whether support for housing is best delivered via greater direct investment in social housing and low social rents, or via rent subsidies for those with low incomes (i.e. housing benefit). But it is worth noting that under the present devolution settlement, the Scottish government is bearing the cost of greater investment in social housing and lower rents, whilst some of the benefits of that spending accrue to the UK government in the form of lower housing benefit payments.

Benefit spending per person has grown less quickly in Scotland in recent years than in the rest of the country. In 2000–01, benefit spending per person in Scotland was just over 109% of the amount spent per person across the UK as a whole. By 2005–06 this had fallen to 107% and by 2012–13 it was a little under 102% of the UK level.

What explains the slower growth in benefit spending in Scotland? Our earlier analysis[17] shows that the relatively slower growth in benefit spending in Scotland can be explained partly by stronger growth in employment (at least until 2007) and earnings, a relative fall in the proportion of people entitled to disability benefits, a fall in the number of children relative to the rest of the UK, and slower growth in the proportion of households in receipt of housing benefit.

What happens in the future will depend on future demographic and economic trends in Scotland *vis a vis* the rest of the UK, and policy decisions (whether by the UK government or the Scottish government). The Department for Work and Pensions (DWP) has projected that (under current UK policy and the same assumptions used by the OBR in its Fiscal Sustainability Report)[18] benefit spending *per working age adult* in Scotland will continue to fall relative to the UK until 2018–19, and then increase until the mid-late 2030s, before falling back somewhat (column 1, Table 4).[19]

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[17] Section 3.5, D. Phillips (2013).

[18] *'Fiscal Sustainability Report 2013',* Office for Budget Responsibility, 2013. Available at: http://budgetresponsibility.org.uk/fiscal-sustainability-report-july-2013/.

[19] '*Long term projections of social security expenditure in the United Kingdom, including Scotland'*, Department for Work and Pensions, 2013. Available at:

Table 4. Benefit spending per working age person in Scotland (% of UK), current policy and Scottish Government policy (low migration scenarios)

Year	*Current policy*	*Scottish Government policy*
2012-13	100.2%	100.2%
2018-19	99.2%	101.4%
2028–29	101.6%	107.6%
2038–39	103.4%	106.8%
2048–49	100.9%	104.5%
2058–59	101.0%	104.5%

Note: The gap
Source: DWP statistics, see footnote 19.

Column 2 of Table 4 shows DWP's estimates of how the spending gap would change given the current Scottish government's stated intentions for benefits policy in an independent Scotland. In particular it includes the impact of:

- Undoing recent changes to housing benefit that reduce payments to tenants of social landlords who are deemed to be under-occupying their homes (the 'bedroom tax').
- Halting the roll-out of universal credit and the transfer of working-age claimants of disability living allowance to personal independence payments (which have tougher eligibility criteria, expected to reduce the number of claimants by around 20%).
- Retaining the savings credit element of pension credit, and setting the new flat-rate state pension at a slightly higher level than planned by the UK government.

It also includes the impact of delaying the date at which the state pension age starts increasing from 66 to 67, from 2026 to 2034. This is not Scottish Government policy. However, the Scottish Government has stated it will assess the case for delaying the increase in the state pension age planned for 2026. [20] One option would be to put this increase back to when it was initially planned (2034) before being brought forward by the current UK Government.

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https://www.gov.uk/government/publications/long-term-projections-of-social-security-expenditure-in-the-united-kingdom-including-scotland.

[20] Recent announcements have hinted strongly that the Scottish government would delay the increase in the pension age, and have argued that such a policy would be fairer due to lower life expectancy in Scotland, and that such a policy would be more affordable in an independent Scotland (http://news.scotland.gov.uk/News/Life-expectancy-and-state-pensions-c6b.aspx). This issue is discussed in more detail in D. Phillips and G. Tetlow (2014).

Unsurprisingly, these increases in generosity would cost money. For instance, in 2018–19, rather than being 0.8% lower per working age person, benefit spending in Scotland would be 1.4% higher under Scottish Government plans. This gap would increase to 7.6% in 2028–29, when the state pension age is assumed to be 66 in Scotland but 67 elsewhere in the UK, before falling back to 4.5% by the late 2050s.

As well as increasing generosity, and/or undoing unpopular elements of recent benefits policy, independence would give Scotland the opportunity for more radical reform. However, major reforms to the benefit system would likely either create large numbers of losers or else involve a substantial increase in overall benefit spending. This does not mean such reforms should not be considered but it is important to bear in mind that there is often difficulty in translating worthy aims into feasible and affordable policies.[21]

3. Taxation in Scotland

This section describes the current level and composition of tax revenues in Scotland and examines how and why they differ from those in the UK as a whole. Because most taxes are collected at the UK level – the major exceptions are council tax and non-domestic rates – it is not straightforward to identify the precise amounts obtained from Scotland's residents or enterprises. The Scottish Government's GERS publication provides estimates of the revenues raised in Scotland, and it is those estimates we use here. These are not the only estimates available: last year, HM Revenue and Customs (HMRC) for the first time produced its own estimates allocating revenue from HMRC taxes (but not other taxes) between England, Scotland, Wales and Northern Ireland.[22] For those taxes covered by HMRC's statistics, their estimates are mostly very similar to those in GERS – and in aggregate the differences is just £151 million, just 0.3% of overall Scottish tax revenues. However, there are two notable exceptions – onshore corporation tax and stamp duty on shares – where there are substantial differences in methodology. Earlier differences in estimates of North Sea revenues have been substantially reduced following revisions to GERS estimates

[21] See sections 5.2 and 5.3, Phillips (2013), for further details.

[22] See http://www.hmrc.gov.uk/statistics/receipts.htm, and S. Adam and H. Miller (2013), "Tax revenue in England, Scotland, Wales and Northern Ireland", IFS Observation, http://www.ifs.org.uk/publications/6881.

which have reduced the share of North Sea taxes allocated to Scotland.[23] Our earlier work provides further discussion,[24] and Appendix 2 of this report provides a full comparison of GERS and HMRC methodologies and the resulting 2012–13 revenue estimates.

Since North Sea oil and gas is a potentially important source of revenue for an independent Scotland, but there is substantial uncertainty about just how much revenue will be raised from this source, we first analyse onshore revenue in isolation and then look at the effect of adding in offshore revenue.

Onshore revenue

In 2012–13, onshore revenue in Scotland was £47.6 billion, equivalent to £8,952 per person, or 37.7% of Scotland's onshore GDP. In the UK as a whole, onshore revenue was £580.2 billion, equivalent to £9,109 per person, or 37.0% of the UK's onshore GDP.[25] This means that onshore revenues per person in Scotland were 98.3% of the figure for the UK as a whole and that – with 8.4% of the UK population – Scotland contributed 8.2% of UK onshore revenues.

Table 5 shows the composition of onshore revenue in 2012–13 in Scotland and the UK. On the whole, the composition of revenue in Scotland does not differ greatly from that in the UK as a whole. In both cases, the three big taxes – income tax, National Insurance contributions (NICs) and VAT – account for more than three-fifths of revenue. But according to GERS, relative to the UK as a whole, somewhat more of Scotland's onshore revenue comes from: corporation tax; VAT; 'sin taxes' on alcohol, tobacco and gambling; smaller environmental taxes; 'other revenue'.[26] Scotland generates somewhat less of its revenue from: income tax; capital gains tax (CGT) and inheritance tax; stamp duty land tax (SDLT) and council tax.

[23] Appendix 1 compares tax revenue estimates from the GERS 2011–12 and GERS 2012–13 publications.

[24] See pages 12, 13 and 15 of S. Adam, P. Johnson, and B. Roantree, '*Taxing an independent Scotland'*, Institute for Fiscal Studies, 2013.

[25] The shares of national income taken in tax in Scotland and the UK as a whole have not always been so similar. See Figure 1 of S. Adam, P. Johnson, and B. Roantree, 2013.

[26] This last difference principally reflects the profits of Scottish Water, a public corporation that has no direct equivalent in England and Wales, where water provision is privatised.

Table 5. Scottish and UK onshore revenues by source, 2012–13

	Scotland			UK			Scotland as % of UK
	£ bn	£ per person	% of onshore revenue	£ bn	£ per person	% of onshore revenue	
Income tax[a]	10.8	2,045	22.8%	147.7	2,319	25.5%	7.4%
National Insurance contributions	8.2	1,604	17.9%	104.5	1,640	18.0%	8.2%
Onshore corporation tax	2.8	540	6.0%	34.4	540	5.9%	8.4%
Capital gains tax	0.3	55	0.6%	3.9	62	0.7%	7.4%
Inheritance tax	0.2	46	0.5%	3.2	49	0.5%	7.7%
Stamp duty on shares	0.2	36	0.4%	2.2	35	0.4%	8.5%
Stamp duty land tax	0.3	53	0.6%	6.9	108	1.2%	4.1%
Business rates	2.0	373	4.2%	25.1	394	4.3%	7.9%
Council tax	2.0	378	4.2%	26.3	413	4.5%	7.6%
VAT	9.3	1,759	19.7%	112.1	1,759	19.3%	8.3%
Fuel duties	2.3	425	4.7%	26.6	417	4.6%	8.5%
Tobacco duties	1.1	212	2.4%	9.6	151	1.7%	11.8%
Alcohol duties	1.0	184	2.1%	10.1	159	1.7%	9.7%
Vehicle excise duty	0.5	91	1.0%	6.0	94	1.0%	8.0%
Betting and gaming duties	0.1	23	0.3%	1.2	19	0.2%	9.8%
Insurance premium tax	0.2	39	0.4%	3.0	48	0.5%	6.8%
Air passenger duty	0.2	44	0.5%	2.8	44	0.5%	8.3%
Landfill tax	0.1	19	0.2%	1.1	18	0.2%	9.0%
Climate change levy	0.1	12	0.1%	0.7	10	0.1%	9.5%
Aggregates levy	0.0	8	0.1%	0.3	4	0.0%	17.2%
Other receipts and adjustments[b]	5.0	956	11.2%	49.5	777	9.1%	10.2%
Total onshore current revenue	**47.6**	**8,952**	**100.0%**	**580.3**	**9,109**	**100.0%**	**8.2%**

[a] Net of the part of tax credits classified as negative income tax in the National Accounts. Most of the cost of tax credits is counted as government spending.
[b] Includes some small taxes, TV licences, National Lottery funds, royalties, interest and dividends, rent, gross operating surplus and accounting adjustments.
Source: Authors' calculations from table 3.1 of GERS 2012–13.

In terms of revenue per person, the biggest difference comes from the biggest tax: in 2012–13, income tax provided £2,045 per person in Scotland, well below the UK figure of £2,319. This is particularly interesting because NICs, which are like income tax in many respects, yield similar amounts in Scotland and the rest of the UK. This is explained by two factors.[27] First, the combination of the progressive rate structure of income tax and the slightly more equal distribution of income in Scotland. Second, income tax is levied on investment income, which is lower in Scotland than in the rest of the UK, whereas NICs are only levied on earned income.

Where Scots pay more than the rest of the UK is in indirect taxes – in particular, duties on betting and gaming, alcohol, and tobacco together rake in £419 per person in Scotland, compared to £329 across the UK as a whole. Higher levels of smoking, and higher consumption of spirits (which is taxed far more heavily per unit of alcohol than beer and wine) explain this pattern.[28]

Adding in offshore revenue

North Sea oil and gas production contributed £6.6 billion to the UK Exchequer in 2012–13.[29] How ownership of this resource would be divided in the event of Scottish independence would be a matter for legal argument and negotiation.[30] Here we present figures that assume revenues from oil and gas production would be allocated to Scotland on a geographic basis. GERS provides figures assuming both population-based and geographic allocations of revenues: the difference between these two sets of figures is discussed in Adam, Johnson and Roantree (2013).

North Sea revenues are highly volatile, contributing an amount equal to 2.0% of onshore revenues (or £11.3 billion) for the UK as a whole in 2011–12, but just 1.1% of onshore revenues (or £6.6 billion) in 2012–13. Allocated on a geographic basis, North Sea revenues are of much greater importance to overall tax revenues in Scotland than for the UK as a whole. This means that the volatility in this

[27] See pages 9 and 10 of S. Adam, P. Johnson and B. Roantree, 2013.

[28] Other differences in revenue raised per person in Scotland and the UK are discussed in more detail in S. Adam, P. Johnson and B. Roantree (2013).

[29] This revenue came from a combination of offshore corporation tax (including a supplementary charge applied only to North Sea profits) and petroleum revenue tax.

[30] There would also need to be negotiations about issues such as decommissioning costs and the revenue accruing from investments that benefited from upfront investment allowances.

revenue stream becomes economically much more significant to Scotland than it is for the UK as a whole. For instance, in 2011–12, Scotland's geographic share of North Sea taxes is estimated to have been £10.0 billion, the equivalent over 21% of Scottish onshore tax revenues, but this fell to under 12% (£5.6 billion) in 2012–13.

Figures for 2013–14 show a further decline in North Sea revenues.[31] This would mean North Sea revenue for Scotland of approximately £4.1 billion in 2013–14, compared to £5.6 billion in 2012–13 and £10.0 billion in 2011–12.[32] Looking ahead, the OBR's central forecast is for offshore tax receipts to continue to decline. However, the future path of offshore revenues is highly uncertain and the Scottish government is more optimistic. For this reason, in the next section, we explore how sensitive an independent Scotland's public finances would be to different scenarios for North Sea revenues.

Bringing onshore and offshore revenues together allows us to look at total revenues (Table 6). Total UK government revenue in 2012–13 was £586.9 billion (or £9,213 per person). Allocating offshore revenues on a geographical basis, GERS estimates that Scottish revenues were £53.1 billion (£10,002 per person). On this basis, total revenues in 2012–13 were £789 (8.6%) higher than in the UK as a whole. Most, but not all, of this higher revenue would disappear in the coming years if offshore revenues decline as the OBR expects.

Table 6. Total tax revenues in Scotland and the UK (2012-13 prices)

	2008–09	*2009–10*	*2010–11*	*2011–12*	*2012–13*
United Kingdom					
£ billion	588.7	551.5	578.5	587.1	586.9
£ per person	9,523	8,858	9,217	9,277	9,213
% of GDP	37.2%	36.0%	37.0%	37.2%	37.3%
Scotland – geog. share of North Sea					
£ billion	60.8	51.0	53.9	57.3	53.1
£ per person	11,679	9,749	10,245	10,813	10,002
% of GDP	38.8%	35.5%	35.7%	38.3%	36.7%

Source: GERS 2012–13.

[31] https://www.gov.uk/government/publications/hmrc-tax-and-nics-receipts-for-the-uk

[32] GERS estimates that Scotland's geographic share of North Sea revenues in 2012–13 was 84.2%.

4. Scotland's public finances: the medium term outlook

So what do these revenue and spending estimates imply for Scotland's notional fiscal position? We examine two commonly used measures of the fiscal position: the *current budget balance* and the *net fiscal balance*. The current budget balance refers to the gap between revenues and current expenditure (including depreciation). The net fiscal balance adds in net investment (i.e. capital expenditure minus depreciation) to obtain a more complete picture of how total spending compares to revenues (this is similar to what the UK government terms public sector net borrowing).

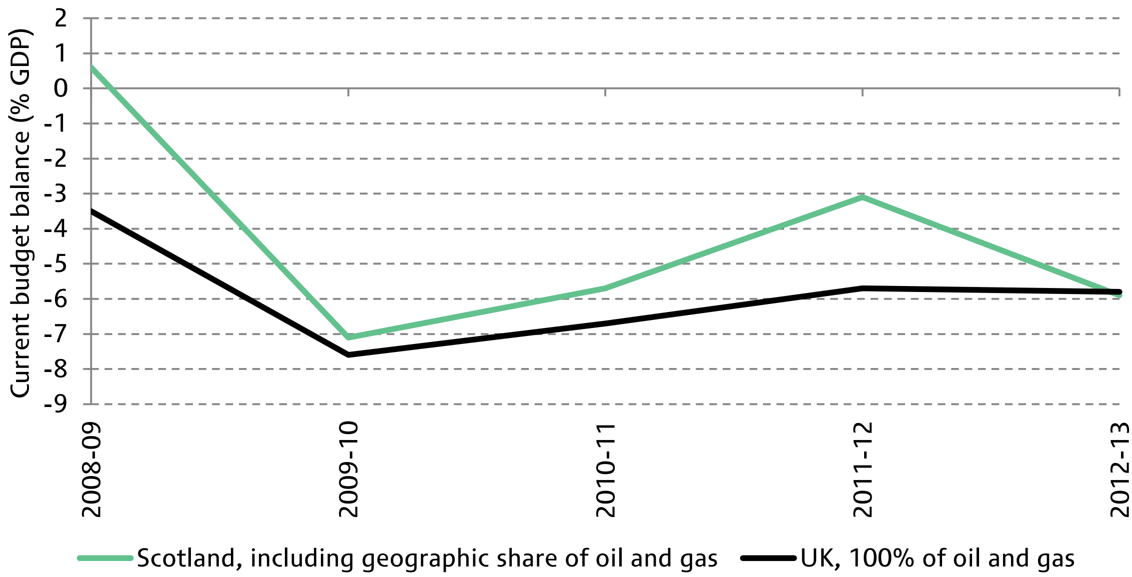
Scotland's public finances: a historical perspective

How did Scotland's public finances look in the years up to 2012–13? Figures 3 and 4 show the current budget balance and the net fiscal balance for Scotland and for the UK as a whole for the period 2008–09 to 2012–13.

If oil and gas revenues are allocated on a geographic basis, Scotland's current budget deficit is estimated to have been 5.9% of GDP in 2012–13 and the net fiscal deficit to have been 8.3% of GDP. This compares to 5.8% and 7.3%, respectively, for the UK. That Scotland's current budget position was similar to the UK's but its net fiscal position was worse reflects the fact that, as set out in Section 2, Scotland has a higher level of capital spending than the UK does.

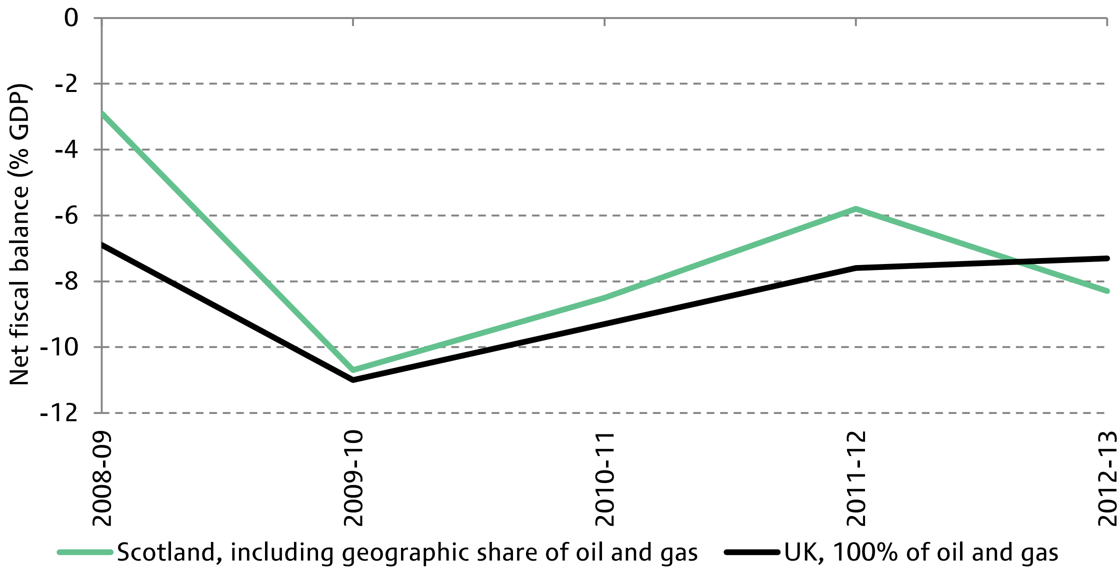
In the four years before that, revenues from oil and gas production were larger and so, on this basis, Scotland had a stronger fiscal position than for the UK as a whole. The fall in revenues from oil and gas production in 2012–13 meant that Scotland's current budget position and net fiscal balance actually worsened between 2011–12 and 2012–13, rather than strengthening as was seen for the UK as a whole.

Figure 3. Current budget balance as a percentage of GDP: UK and Scotland



Sources: Government Expenditure and Revenue Scotland 2012–13; authors' calculations.

Figure 4. Net fiscal balance as a percentage of GDP: UK and Scotland



Sources: Government Expenditure and Revenue Scotland 2012–13; authors' calculations.

The health of Scotland's public finances (assuming a geographic share of oil and gas revenues) is strongly linked to the scale of revenues from oil and gas production. In good years – such as 2008–09 and 2011–12 – strong revenues mean Scotland's fiscal balance has been better than that of the UK as a whole. In less good years – such as 2012–13 and much of the 1990s and early 2000s – Scotland's position has been worse. How oil and gas revenues evolve over the coming years would therefore be central to an independent Scotland's public finances if these revenues are split on a geographic basis, as seems likely to be the case.[33]

Scotland's public finances: the prospects to 2018–19

In this section we present updated forecasts for Scotland's net fiscal balance for the period up to 2018–19.[34] It is not only revenues from oil and gas that are uncertain over this horizon. How onshore revenues and public spending will change in Scotland and the UK as a whole is also uncertain and will depend on the strength of their economies and the policy decisions taken by government. If Scotland votes for independence, negotiations around issues such as how to split the national debt will also have to take place and it is not clear what rate of interest the Scottish government would have to pay on any debt it inherits or issues. Because of these uncertainties, we look at a number of different scenarios for Scotland's public finances by varying assumptions about:

- the level of revenues from oil and gas;
- the level of debt an independent Scotland would inherit;
- whether the government of an independent Scotland continues with the UK government's fiscal consolidation plans beyond April 2016.

In our scenarios, we assume the UK's public finances evolve in line with the latest OBR forecasts from the March 2014 *Economic and Fiscal Outlook*. These show the UK's net fiscal deficit steadily shrinking over the forecast period as the economy recovers and further fiscal consolidation (largely consisting of public spending cuts) is implemented. The OBR forecasts suggest that in 2018–19 the UK will be running a small net fiscal surplus for the first time since 2001–02.

We produce our forecasts for Scotland using bottom-up projections of different components of revenue and spending. These projections take as their starting point Scotland's share of these revenues and spending in 2012–13 (according to

[33] Of course, if an independent Scotland were to receive a less-than-geographical share of North Sea revenues, its fiscal position would be even worse: a smaller share of a volatile revenue stream does mean less volatility, but it also means less revenue too.

[34] This updates the analysis that was presented in M. Amior, R. Crawford and G. Tetlow (2013), *Fiscal sustainability of an independent Scotland*, IFS Report, R88 and R. Crawford and G. Tetlow (2014), *The next five years look better but tough fiscal choices remain for Scotland*, IFS Observation. A comparison of our latest projections for the Scottish net fiscal balance (presented here) to those that we and other organisations have previously produced is provided in Appendix 3.

GERS), and then project forward using forecast UK-wide changes, accounting for the different demographic trends in Scotland and the UK as a whole.[35] In our baseline projections for Scotland we assume that Scotland would inherit a population-based share of the UK's national debt, and that North Sea revenues move in line with OBR forecasts. Figure 5 shows that under the baseline scenario Scotland's net fiscal deficit would be around 5.5% of GDP in its first year of independence (2016–17). If the government of an independent Scotland continued to implement the fiscal consolidation that is being planned by the UK government, the net fiscal deficit would shrink to 2.9% of GDP in 2018–19. However this is around 3% of GDP larger than the UK's deficit in 2018–19 (The OBR forecasts a surplus of 0.2% for the UK as a whole).[36]

However, Figure 5 also demonstrates how sensitive Scotland's medium-term fiscal position will be to revenues from oil and gas. If revenues from oil and gas were instead to evolve according to one of the more optimistic scenarios contained in the Scottish governments recent *Oil and Gas Analytical Bulletin*,[37] Scotland's fiscal balance would be significantly better – a deficit of 0.9% of GDP by 2018–19 – although still weaker than the UK's position in that year (which would show a surplus of 0.4% of GDP under this scenario).

Scotland's primary deficit – that is the gap between tax revenues and public spending excluding debt interest repayments – is forecast to be 2.8% of GDP in its first year of independence (2016–17) under our baseline scenario. Thus it would have to borrow to cover day-to-day spending even ignoring the amount needing to be spent on debt interest payments. Therefore, what interest rate

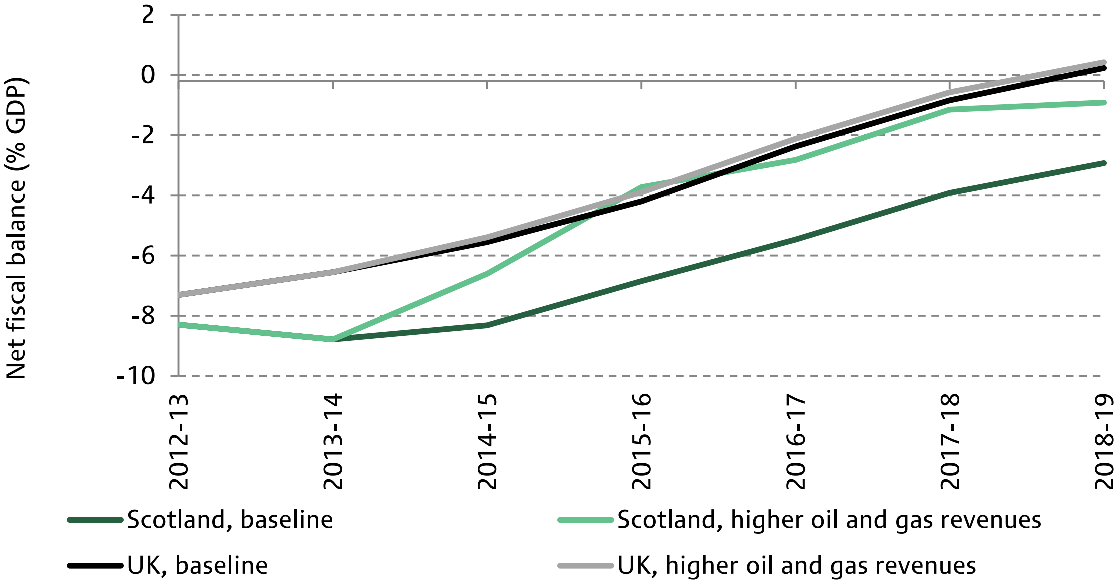
[35] Full details of this method can be found in Sections 3, 4 and 5 of M. Amior, R. Crawford and G. Tetlow, *The UK's public finances in the long run: the IFS model*, Institute for Fiscal Studies Working Paper W13/29, 2013. We have made some changes to the methodology described by Amior, Crawford and Tetlow (2013). In particular, the results presented in this report are based on more recent population projections from the Office for National Statistics 2012-based population projections and use the revenue and spending allocations outlined in GERS 2014.

[36] This compares to a gap of 2.1% of GDP between the UK and Scotland in 2017–18 suggested by Amior, Crawford and Tetlow (2013). The main factor that has lead to a worsening of Scotland's position relative to that of the UK is the downward revision to forecast revenues from oil and gas which the OBR made in December 2013, coupled with the lower share of these revenues that GERS now suggests will accrue to Scotland on a geographic basis.

[37] Specifically, we assume that total UK oil and gas revenues evolve as implied by scenario 4 presented in the Scottish Government's May 2014 *Oil and Gas Analytical Bulletin*. This is also the scenario underlying the figures presented in Scottish Government (2014), *Outlook for Scotland's Public Finances and the Opportunities of Independence*, May 2014.

lenders charge to the government of an independent Scotland will be a pertinent question, regardless of what share of the UK's existing debt Scotland is required to service. However, the interest rate will be much more important if Scotland also inherits a significant share of existing debt.

Figure 5. Forecast net fiscal balance as a percentage of GDP: UK and Scotland (baseline and high oil and gas revenue scenarios)



Notes: The 'higher oil and gas revenues' scenario assumes that UK oil and gas revenues from 2014–15 onwards evolve as described in scenario 4 of the Scottish Government's March 2013 Oil and Gas Analytical Bulletin.
Sources: Authors' calculations.

Figure 6 shows how Scotland's fiscal position would differ after the date of potential independence if, instead of inheriting a population based share of debt, it inherited either the Scottish government's estimate of its historic share of the UK's debt – which the Independence White Paper states is equivalent to around 55% of GDP in 2016–17[38] – or zero net debt. All else equal, a lower level of debt would act to reduce the size of an independent Scotland's net fiscal deficit by reducing the amount to be spent on debt interest payments.

Under our baseline scenario, with a population based share of debt and assuming that Scotland would be charged the same average rate of interest as the UK, we estimate that Scotland would have to devote 2.7% of GDP to debt interest payments in 2016–17, rising to 3.0% by 2018–19. Negotiating a settlement with the UK government that involved no transfer of debt to Scotland would,

[38] Annex C, *Scotland's Future: your guide to an independent Scotland*, Scottish Government.

therefore, strengthen Scotland's fiscal position considerably. As Figure 6 shows, under this scenario Scotland would have a similar net fiscal position in 2018–19 to that of the UK as a whole. If Scotland were instead to inherit debt worth around 55% of Scottish GDP, Scotland's fiscal position would be slightly stronger than in our baseline scenario – with a net fiscal deficit of 2.1% of GDP in 2018–19, rather than 2.9%.

Ultimately, how much debt an independent Scotland would inherit is a matter for negotiation. Previous break-ups of states include examples where debt has been allocated in proportion to population (such as the former Czechoslovakia[39]), where the main successor state eventually takes on all debts (as the UK did when Ireland became independent in the 1920s), and on the basis of more complex calculations including relative GDP (such as in the IMF's proposals for the former Yugoslavia).[40] Thus, there may be scope for an independent Scotland to negotiate a share of debt that differs from a population share, particularly as part of broader negotiations with the UK on other issues. As discussed in Box 1, however, there are a number of issues with the Scottish government's calculations of its 'historic' debt share, which may mean it is not a fully appropriate benchmark for the apportionment of debt.

Box 4.1. Critiquing the Scottish Government's historical apportionment of debt

The Scottish Government's historical apportionment is based on accumulating the surpluses and deficits recorded by the Scottish National Accounts Project (SNAP) since 1980–81 and projecting them forward to 2016–17 on the basis of the Scottish Government's forecasts. Because of the large notional surpluses associated with the North Sea revenue boom of the early 1980s, this leads to Scotland having been responsible for a lower-than-population share of UK debt accumulation since 1980–81.

Why start the calculations in 1980–81? The Scottish Government argues that "as approximately 90% of UK public sector net debt has been incurred since 1980, assessing Scotland's fiscal position over this period gives an indication of the amount of UK net debt which has been incurred on behalf of Scotland". However, as pointed out by CPPR, 1980 also coincides with large scale revenues from the North Sea first coming on stream.[a] Prior to these revenues coming on stream, Scotland's notional fiscal balance would have been based on onshore revenues alone. Scotland's average onshore fiscal deficit was 11.0% of GDP, on average, between 1980–81 and 1984–85, compared to 6.1% for the UK as a whole. This reflects substantially higher public spending in Scotland (60.3% versus 47.6% of GDP), only partially offset by higher estimated onshore revenues (49.2% versus 44.1% of GDP). If, as seems more likely than not, these differences in onshore revenues and spending existed before 1980,[b] Scotland's notional fiscal balance prior to 1980 would have been more in deficit than the UK as whole. These bigger deficits pre-

[39] Debts were split on a two-thirds/one-third basis between the Czech Republic and Slovakia.

[40] See A. Stanic, *Financial Aspects of State Succession: The Case of Yugoslavia*, European Journal of International Law, Vol. 12, No. 4, 2001.

1980 would act to increase Scotland's historical share of debt if it were calculated over a longer time period, perhaps substantially. In other words, starting the calculations in 1980–81 may paint an overly flattering picture of Scotland's historic share of debt. If an historic apportionment of debt does become part of the negotiations, there is a strong case for arguing that calculations should go back further in time (although data limitations make this more of a challenge the further back one goes).

In a paper for the Jimmy Reid Foundation, Jim and Margaret Cuthbert critique the Scottish Government's historic apportionment from a different angle.[c] They point out that the GERS/SNAP methodology allocates debt-interest spending to Scotland on a population-basis. However, if one were calculating Scotland's share of debt based on its notional public finances since 1980–81, one would want to calculate the debt interest that it would have paid on its notional levels of debt each year (rather than its population-based share of overall UK debt). Because of high North Sea revenues in the 1980s, these authors argue that Scotland would quickly have accumulated substantial net assets (instead of net debt) on which it would have earned (instead of paid) interest. They estimate that Scotland would have an accumulated fund of £148 billion (close to 100% of GDP) in 2011–12. Similar estimates have also been made by the Scottish Government's Fiscal Commission (who estimate the fund would be worth £82 billion assuming real returns of 1% and £116 billion assuming real returns of 2%).[d] The underlying reasoning here is sound: if it were decided to apportion debts based on historic public finances, a case can be made for doing so using figures that allocate historic debt interest payments based upon historic notional stocks of debt/assets. But again, the question of why the calculations should start in 1980 rears its head?[e] Both the Fiscal Commission and the Jimmy Reid Foundation's paper begin their calculations by assuming Scotland had a population-based share of the UK's debts in 1980. But as discussed above, if higher public spending prior to 1980 led to bigger budget deficits before this date, it seems like that Scotland would start with a greater (and potentially much greater) than population-based share of debts in 1980 if debt were allocated on an historic basis. Indeed, compared to the Scottish Government's method of historic debt apportionment, this effect would be even more pronounced, as pre-1980 fiscal deficits would also be larger (because Scotland's share of debt interest payments would be higher), which would feed back into higher levels of debt, and so on. Thus taking a longer time horizon, it seems likely that estimates of accumulated surpluses would be smaller, or even turn into estimates of net debt.

Ultimately, the amount of debt an independent Scotland would inherit would be the result of negotiation between the Scottish and UK government. Estimates of the historical position are likely to play some role in these negotiations, but it is clear that calculating such estimates is difficult, and that any suggested figures are likely to prove controversial.

[a] Fiscal implications for an independent Scotland when assuming that it takes on a low, or zero, share of the UK's existing debt, CPPR Briefing Note.

[b] As supporting evidence, identifiable public spending per person in Scotland was 22% higher than in England in 1976–77. HM Treasury, Needs Assessment Study – Report, 1979.

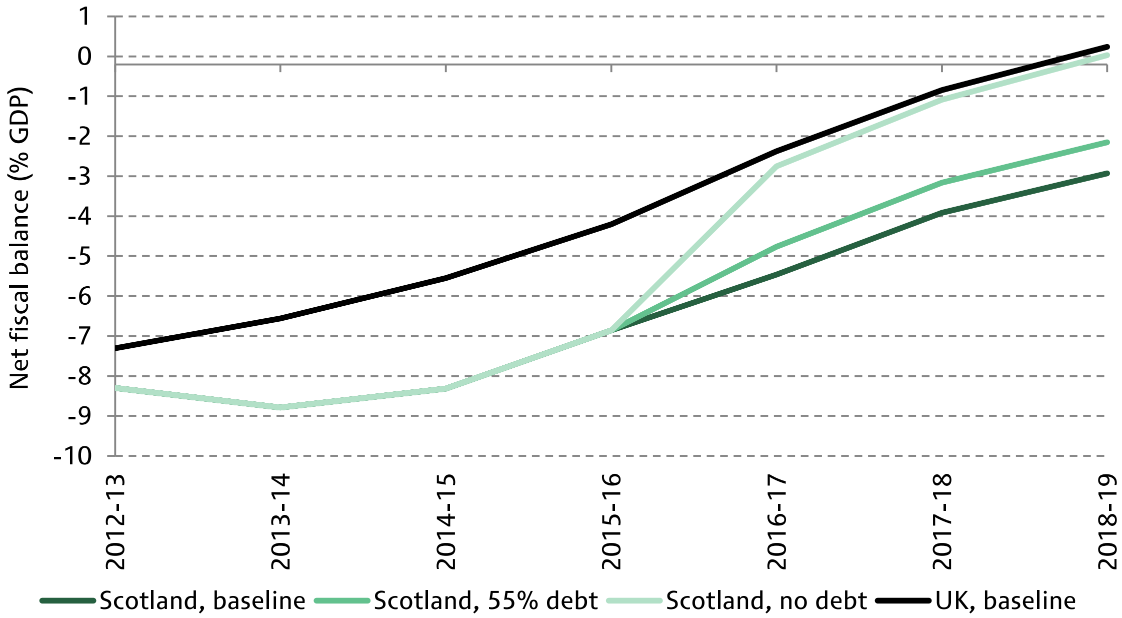
[c] J. Cuthbert and M. Cuthbert, Issues surround the sharing of UK debt post-independence, the Jimmy Reid Foundation.

[d] Fiscal Commission Working Group, Stabilisation and Savings Funds for Scotland, 2013.

[e] J & M Cuthbert argue that it is valid to begin historical apportionments in 1980 because the advent of North Sea revenues around this time represented a "profound and discrete disturbance to any pre-existing equilibrium". Thus, they decide earlier history can be ignored and the UK's debts in 1980 be shared on a population-basis. It is true that this was a significant economic change for the UK and particularly Scotland. But it does not follow from this that one can ignore the position before 1980. Indeed, under their reasoning, it could be argued that independence would also represent a "profound and discrete disturbance", and that earlier history should be ignored, and debts shared on a population basis from the moment of independence.

Figures 5 and 6 assume that Scotland would pay the same average rate of interest on debt as the UK is expected to.[41] However, Scotland – as a new, smaller country with no track record of fiscal management – might well be charged a higher rate of interest than the UK, as Armstrong and Ebell (2013) discuss.[42] If interest rates were higher, Scotland's debt interest spending would be larger than is assumed in Figures 5 and 6, and hence its fiscal deficit would also be larger.

Figure 6. Forecast net fiscal balance as a percentage of GDP: UK and Scotland (baseline and alternative debt share scenarios)



Note: All scenarios shown assume that Scotland would face the same average interest rate on outstanding debt post-independence as the UK as a whole is forecast to face.
Sources: Authors' calculations.

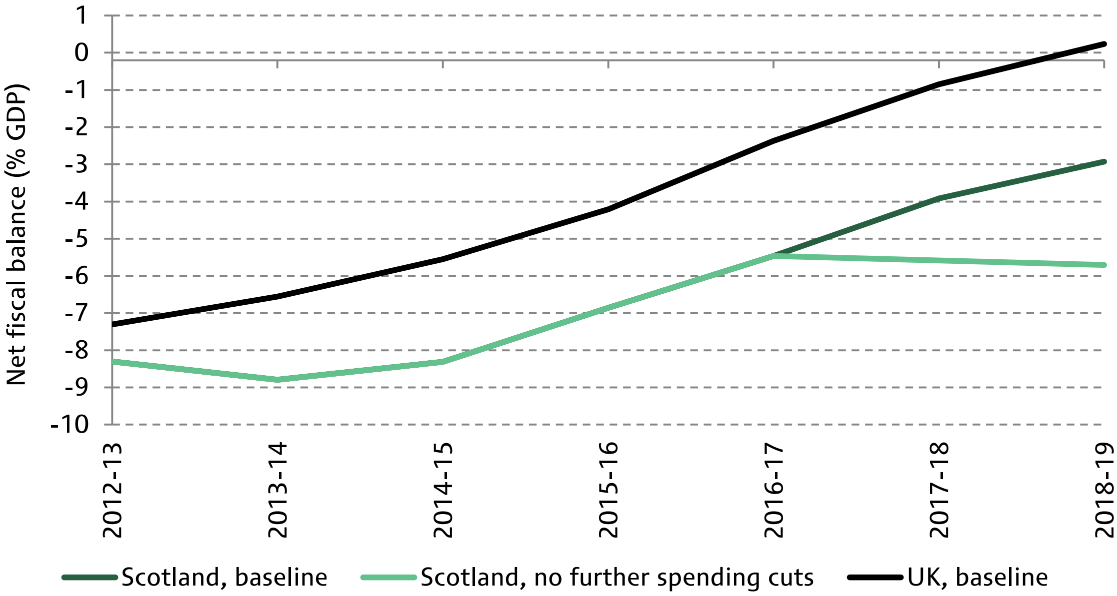
All the figures presented so far assume that the government of an independent Scotland would continue to implement the fiscal tightening currently planned by the UK government for the years after potential independence. Figure 7 illustrates how Scotland's net fiscal balance might evolve if instead the Scottish government chose not to implement the fiscal tightening planned for 2017–18 and 2018–19. If this were to happen, Scotland's net fiscal deficit would remain at nearly 6% of GDP from 2016–17 until 2018–19, rather than experiencing a further fiscal strengthening. This is nearly 3% of GDP higher than in our baseline

[41] The OBR's March 2014 forecasts suggest that the average rate of interest on outstanding UK debt will rise from 3.3% in 2014–15 to 3.9% in 2018–19.

[42] A. Armstrong and M. Ebell (2013), 'Scotland's currency options', National Institute of Economics and Social Research, Discussion Paper 415.

scenario and is a level of borrowing that would not be sustainable for any prolonged period. Thus, while independence would certainly bring more choice about how to deliver the planned fiscal consolidation – for instance the mix of tax rises and spending cuts, or the timescale over which to deliver it – it would not mean that further fiscal consolidation could be avoided unless North Sea revenues were to rebound very strongly. Indeed, in our baseline scenario, the spending cuts or tax rises that would ultimately need to be made to ensure fiscal sustainability would be greater for an independent Scotland than for the UK as a whole.

Figure 7. Forecast net fiscal balance as a percentage of GDP: UK and Scotland (baseline and assuming no further spending cuts after 2016–17)



Sources: Authors' calculations.

Ensuring longer-run fiscal sustainability

Our previous work, which projected the fiscal position for an independent Scotland over the next 50 years, showed that Scotland will face significant fiscal challenges in future – requiring further tax increases and/or spending cuts after independence to ensure that debt will be on a sustainable path over the longer-run.[43] While the UK as a whole also faces a similar challenge, our analysis suggests that the challenge facing an independent Scotland would be larger. We found this to be true under a range of assumptions about future revenues from oil and gas production, productivity growth, migration, the amount of debt

[43] See M. Amior, R. Crawford and G. Tetlow (2013), *Fiscal sustainability of an independent Scotland*, IFS Report, R89.

inherited from the UK, and the interest rate charged by lenders to an independent Scottish government. The exact scale of the challenge is, however, obviously very sensitive to these assumptions: under the range of scenarios that we examined, we estimated that a fiscal tightening of between 1.9% and 6.3% of GDP would be required by an independent Scotland to ensure that debt did not exceed 40% of GDP by 2062–63.

Our earlier work was based on forecasts for the UK's public finances made by the OBR in March 2013. Since then the OBR has revised its forecasts and now projects that the UK's public finances will be stronger at the end of the medium-term horizon than was previously suggested. Specifically, the OBR now forecasts that structural borrowing will be –0.3 % of GDP (i.e. a surplus) at the end of the medium-term forecast horizon, rather than the 0.7% of GDP forecast in March 2013. This stronger position is largely the result of the additional spending cuts that George Osborne has pencilled in for 2018–19.

Assuming the government of an independent Scotland continued to implement the spending cuts planned by the current UK government up to 2018–19, these new figures for the UK also suggest that Scotland's medium-term fiscal position would be stronger than we assumed in our earlier work – by around 1% of GDP. However, this does not fundamentally change our conclusion that any government of a newly independent Scotland in 2016–17 is likely to need to find net tax rises and/or net spending cuts in order to ensure fiscal sustainability for Scotland. First, the stronger medium-term position assumes that the government of an independent Scotland would continue to implement the spending cuts pencilled in by George Osborne for 2017–18 and 2018–19. Second, the strengthening in Scotland's estimated fiscal position that has occurred since we published our previous report is still smaller than the size of fiscal consolidation we estimated would be required.

Our projections suggest that George Osborne's planned spending cuts in 2017–18 and 2018–19 would require a 6.8% cut to public service spending in real terms, if no further cuts were made to welfare spending.[44] Exactly how large the tax increases and/or spending cuts required by an independent Scottish government would need to be (and how quickly they would need to be implemented) would, however, depend on a number of factors. This includes those highlighted earlier

[44] 'Public service spending' is defined here as non-debt interest spending less spending on benefits and public service pensions.

in this section and whatever the preferences of a newly independent Scottish government were for the level of public borrowing and debt.

It is against this fiscal backdrop that the policy proposals for an independent Scotland should be considered. The proposals contained in the Scottish government's White Paper are discussed in more detail in a companion Briefing Note.[45]

5. Conclusions

Under present devolution arrangements, the responsibility for public spending in Scotland is split between the UK government – which is responsible for benefit spending, defence and foreign affairs, for instance – and the Scottish government – which is responsible for most other public services such as health and education. Public spending per person has long been higher in Scotland than in the UK as a whole, with the difference being around 11% (£1,257) in 2012–13. Within this, benefit spending is only 2% higher, but spending on public services is 19% higher, reflecting the relatively generous funding the Scottish government currently receives under the Barnett formula.

Taxation is largely the responsibility of the UK government – although the Scotland Act 2012 does devolve more powers and revenues to Scotland. In contrast to spending, onshore tax revenues have generally been slightly *lower* per person – 2% lower in 2012–13, for instance. Between 2008–09 and 2011–12 offshore revenues – taxes on oil and gas – more than made up for this gap. But falling production, and increases in tax-deductable investment and operating costs, means that these revenues fell substantially in 2012–13 and were no longer sufficient to fill the gap between onshore taxes and spending fully. Scotland therefore went from having a smaller budget deficit than the UK in 2011–12, to a larger one in 2012–13. North Sea revenues declined further in 2013–14, making it is likely that Scotland's relative fiscal position has continued to deteriorate.

Independence in 2016–17 would be very likely to take place against a backdrop of ongoing fiscal deficits. If the OBR's forecasts are correct Scotland's deficit in that year would be larger than that of the UK. Analysis of the longer-run public finance pressures facing Scotland and the UK suggest that both would face considerable strain over the next 50 years as a result of the ageing population.

[45] D. Phillips and G. Tetlow (2014).

But the public finance challenges facing an independent Scotland would appear to face more substantial challenges that the UK. This largely reflects the weaker initial position of Scotland's public finances and the likely long-run decline in revenues from oil and gas production, which will have a more significant effect on Scotland's fiscal position than that of the UK as a whole. This means that Scotland would likely need to implement further tax increases and/or spending cuts after 2016–17 to achieve a sustainable fiscal position, above and beyond those required by the UK. In other words, while independence would give Scotland more choices about how to manage its public finances, it would not allow Scotland to avoid the pain of further austerity.

Appendix 1

Revisions between GERS 2011–12 and 2012–13 revised down spending, on average, for most service areas (there are exceptions, however, such as public and common services and employment policies). The downwards revisions were largest in monetary terms for education and training and social protection and in proportional terms for science and technology. These downwards revisions are more than offset by a large (~£900 million) upwards revision to the accounting adjustment, however, which means total spending in 2011–12 was revised up approximately £400 million. Between 2011–12 and 2012–13, the most notable falls in spending were for public and common services, defence, public order and safety, agriculture, forestry and fisheries and the accounting adjustment. The most notable increases were enterprise and economic development, environmental protection, and social protection.

Table A1. Comparing public spending in Scotland in GERS 2011–12 and GERS 2012–13, by service area (£s millions)

Spending Area	GERS 2011–12	GERS 2012–13	
	2011–12	2011–12	2012–13
Public and common services	1,477	1,622	1,381
International services	750	666	667
Public sector debt interest	4,072	4,099	4,020
Defence	3,281	3,237	3,027
Public order and safety	2,558	2,860	2,529
Enterprise and economic development	894	853	1,049
Science and technology	335	263	249
Employment policies	130	245	222
Agriculture, forestry and fisheries	988	977	917
Transport	2,648	2,717	2,779
Environment protection	1,237	1,177	1,210
Housing and community amenities	1,719	1,624	1,628
Health	11,066	11,046	11,284
Recreation, culture and religion	1,608	1,555	1,554
Education and training	7,703	7,490	7,651
Social protection	21,656	21,159	22,458
Accounting adjustments	2,337	3,284	2,581
Total	64,457	64,869	65,205

Source: Scottish Government, *Government Expenditure and Revenue Scotland 2011–12 and 2012–13*.

There were downwards revisions to a number of onshore taxes for 2011–12, most notably onshore corporation tax, NICs, VAT, and insurance premium tax. This was offset by an upward revision to gross operating surplus leaving total onshore revenues in 2011–12 little changed between the GERS 2011–12 and GERS 2012–13 estimates. There was a large downward revision to offshore revenues allocated on a geographic basis, however, reflecting a lower estimate of the share of these revenues that derived from production in Scottish waters. This means total revenues (allocating offshore revenues on a geographic basis) in 2011–12 were revised down by approximately £550 million. The latest figures also show that between 2011–12 and 2012–13, most onshore revenues grew in cash-terms, but that offshore revenues fell substantially.

Table A2. Comparing revenues in Scotland in GERS 2011–12 and GERS 2012–13, by tax (£s millions)

Tax	GERS 2011–12	GERS 2012–13	
	2011–12	2011–12	2012–13
Income tax	10,790	10,776	10,865
Corporation tax (excl North Sea)	2,976	2,762	2,872
Capital gains tax	246	278	292
Other taxes on income and wealth	265	261	271
National insurance contributions	8,393	8,284	8,521
VAT	9,554	9,136	9,347
Fuel duties	2,296	2,276	2,258
Stamp duties	506	511	472
Tobacco duties	1,129	1,168	1,128
Alcohol duties	981	978	980
Betting and gaming and duties	115	122	120
Air passenger duty	213	227	234
Insurance premium tax	251	205	207
Landfill tax	97	96	100
Climate change levy	64	64	62
Aggregates levy	52	48	45
Inheritance tax	164	229	243
Vehicle excise duty	475	477	481
Non-domestic rates	1,933	1,933	1,981
Council tax	1,987	1,984	2,006
Other taxes, royalties and adjustments	1,028	988	1,082
Interest and dividends	237	454	623
Gross operating surplus	2,498	3,012	3,247
Rent and other current transfers	47	47	128
North Sea			
Per Capita	942	948	552
Geographic	10,573	10,000	5,581
Total (per capita share of North Sea)	47,239	47,264	48,118
Total (geographic share of North Sea)	56,871	56,315	53,147

Source: Scottish Government, *Government Expenditure and Revenue Scotland 2011–12 and 2012–13*.

Taken together, the upward revision to total spending and downward revision to total revenues in 2011–12 mean that the estimate for Scotland's net fiscal deficit in 2011–12 was revised up by approximately £1 billion in the latest GERS data, from 5.0% of GDP to 5.8% of GDP. There were also (smaller) upwards revisions to the net fiscal deficits of 2010–11 and 2008–09.

Appendix 2

Table A3. Sources of Scottish revenue, 2012–13, and methodology used for apportioning tax revenues to Scotland

Component of revenue	GERS revenue estimate (£m)	GERS methodology	HMRC revenue estimate (£m)	Notable differences between GERS and HMRC
Income tax	10,865	Scottish share of UK income tax revenues estimated using data from HMRC's Survey of Personal Incomes (SPI), a sample of tax records covering 1.8% of UK income tax payers. Since the most recent SPI survey provided data for 2011–12, the change in Scotland's share in subsequent years was estimated using rates of change in income components published as a part of SNAP. The part of tax credits classified as negative income tax (rather than as public expenditure) in the National Accounts was then subtracted, taking Scotland's share of that to be the same as Scotland's (known) share of the total cost of tax credits. Additionally, negative expenditure relating to mortgage interest relief at source and life assurance premium relief at source was allocated on a population basis.	10,934	Similar, but Scotland's share in 2012–13 assumed to equal the average in the three years 2008–09 to 2010–11.
Onshore corporation tax	2,872	Scottish share approximated using the Scottish share of onshore profits (less holding gains) of all public and private corporations in the UK, based on ONS Regional Accounts data, which are in turn derived by allocating total UK gross trading profits to nations (and industries within nations) based on their share of wages and salaries (or, for firms in manufacturing industries, their share of profits as calculated from a survey of firms).	2,671	HMRC takes a more disaggregated approach, estimating the Scottish share of profits and tax for each individual company before aggregating up. Company tax returns were matched to the Inter-Departmental Business Register, which records information on the location of company branches and their employment level. Trading profits are allocated to countries according to the share of branch employment in different locations. Taxable profits arising from chargeable gains, gains on intangible assets and land and property, and overseas income, are allocated to the nation where the UK company is headquartered. Company-level tax liabilities are allocated according to the distribution of taxable profits. Individual companies' tax liabilities are aggregated to the national level and converted to a receipts basis to produce an estimate of corporate tax revenues arising in Scotland. Scotland's share in 2012–13 assumed to equal the average in the three years 2008–09 to 2010–11.
North Sea revenues (population shares)	552	Scotland's share of UK population.	545	Similar.

Component of revenue	GERS revenue estimate (£m)	GERS methodology	HMRC revenue estimate (£m)	Notable differences between GERS and HMRC
North Sea revenues (geographic shares)	5,581	Scottish oil and gas fields identified by location relative to the 'median line' boundary set out in the Scottish Adjacent Waters Boundaries Order 1999. Revenue from each field estimated using a model by Alex Kemp and Linda Stephen of the University of Aberdeen.	5,148	Uses same boundary as GERS, but HMRC's own North Sea Oil and Gas model allocates a different share of profits to each field.
Capital gains tax	292	HMRC out-turns.	292	Similar.
Other taxes on income and wealth	271	Allocation was usually done using the same method as the most similar tax (e.g. horserace betting levy treated in the same way as betting and gaming duties).	—	Not a separate category in HMRC breakdown.
National Insurance contributions	8,521	Scottish share of contributions from Classes 1, 2 and 3 provided by HMRC. Scottish share of Class 4 contributions assumed equal to the share of Class 2 contributions.	8,415	Similar, but Class 1 share applied to all contribution classes and Scotland's share in 2011–12 assumed to equal the average in the three years 2008–09 to 2010–11.
Inheritance tax	243	HMRC estimates.	240	Similar, but Scotland's share in 2011–12 assumed to equal the average in the three years 2008–09 to 2010–11.
VAT	9,347	Scotland's share of VAT payments based on Living Costs and Food Survey (LCFS), which provides survey data on weekly household expenditure on a number of goods and services. An appropriate VAT rate was applied to each item to arrive at an estimate of the proportion of household VAT payments made by Scottish households. Scotland's share of local government VAT refunds was estimated using Scottish share of local government current expenditure on goods and services. Estimates of the central government VAT refunds were based on Scotland's share of population (Ministry of Defence), expenditure on health services (NHS) and total expenditure on services less health and defence (other government departments).	8,737	Broadly similar methodology for households (using the LCFS) but HMRC figures are not net of refunds to local and central government. Accounting for this HMRC figures are close to GERS figures.
Tobacco duties	1,128	Scotland's share based on tobacco expenditure recorded in the LCFS.	1,085	Similar.
Alcohol duties	980	Scotland's share based on expenditure on beer/cider, wine and spirits recorded in the LCFS.	1,004	Similar. Revenue from different forms of alcohol reported separately.
Betting and gaming duties	120	Scotland's share based on gambling expenditure recorded in the LCFS.	173	Similar.
Insurance premium tax	207	Scotland's share of household insurance expenditure recorded in the LCFS.	224	Similar.

Component of revenue	GERS revenue estimate (£m)	GERS methodology	HMRC revenue estimate (£m)	Notable differences between GERS and HMRC
Fuel duties	2,258	Scotland's share based on share of UK fuel consumption, estimated using data on weighted traffic flows on a sample of UK roads published by the Department of Energy and Climate Change (DECC).	2,221	Similar.
Air passenger duty	234	Civil Aviation Authority survey data from 2005, 2009 and 2013 and passenger numbers from the Scottish Transport Statistics are used to estimate the number of Scottish passengers by duty band. HMRC figures for UK passengers by duty band are used to estimate the Scottish share of passengers in the intervening years are produced using the relative growth rates of Scottish and UK passengers.	227	Broadly similar, but based on confidential Civil Aviation Authority data and calculated slightly differently.
Landfill tax	100	Estimate of Scotland's share of UK tonnage of waste sent to landfill, derived from data for parts of the UK from the Scottish Environment Protection Agency, Environment Agency and the Department of Environment in Northern Ireland	100	Similar.
Climate change levy	62	Shares calculated separately for electricity, gas, and solid and other fuels on the following basis, using data from DECC: electricity – electricity consumption by commercial and industrial users; gas – gas sales to commercial and industrial users; solid and other fuels – gross value added (GVA) (less extra-regio).	60	Similar.
Aggregates levy	45	Estimate of Scotland's share of UK's aggregates production from United Kingdom Minerals Yearbook 2011: British Geological Survey.	44	Similar.
Vehicle excise duty	481	Scotland's share of total value of UK vehicle licences issued (less refunds), calculated separately for households and businesses, using DVLA data.	—	Outside scope of HMRC estimates.
Non-domestic rates	1,981	Scottish revenue obtained directly from Scottish Local Government Finance Statistics (SLGFS) figures, adjusted to account for certain deductions such as refunds, reliefs, collection costs and payments by local government.	—	Outside scope of HMRC estimates.
Stamp duty land tax	283	HMRC out-turns.	350	Similar.
Stamp duties – stocks and shares	189	Scotland's share assumed to equal the proportion of share-owning UK adults that are resident in Scotland according to the Family Resources Survey.	106	Scotland's share estimated as the proportion of a sample of companies (the FTSE 100 companies and around 2,000 other companies) that are registered in Scotland (according to Companies House or the London Stock Exchange list), weighted by the value of share turnover from London Stock Exchange data.

Component of revenue	GERS revenue estimate (£m)	GERS methodology	HMRC revenue estimate (£m)	Notable differences between GERS and HMRC
Council tax	2,006	Scottish revenue obtained directly from SLGFS figures.	—	Outside scope of HMRC estimates.
Other taxes, royalties and adjustments	1,082	Fossil fuel levy – GVA; hydro benefit – 100% share; Consumer Credit Act fees, regulatory fees, boat licences, passport fees – population; milk super levy – agriculture GVA; renewable energy obligations – direct figures from ONS; rail franchise premiums – 20% of GNER revenue; TV licences – number of households; National Lottery – as for betting and gaming duty.	—	Outside scope of HMRC estimates.
Interest and dividends	623	Public corporations interest and dividends– public sector GVA from ONS Regional Accounts; local and central government interest and dividends – population.	—	Outside scope of HMRC estimates.
Gross operating surplus (GOS)	3,247	Central and local government GOS – Scotland's share of UK non-market capital consumption. For public corporations, the method differed by element of GOS and by the area of operation (Scotland, non-Scotland, UK): gross trading surpluses, rental income and financial intermediation services indirectly measured were directly attributed to firms classified as operating only in Scotland and were allocated to UK firms on the basis of relevant industry GVA. Holding gains were apportioned on the basis of GVA. For the Housing Revenue Account, figures were obtained directly for local authority rents from the ONS. Underlying data from ONS Regional Accounts.	—	Outside scope of HMRC estimates.
Rent and other current transfers	128	Most items in this category were apportioned on the basis of public sector GVA.	—	Outside scope of HMRC estimates.

Source: Scottish Government, *Government Expenditure and Revenue Scotland 2012-13*, appendix A and the methodology note (http://www.scotland.gov.uk/Resource/0044/00446037.pdf); HMRC, 'A disaggregation of HMRC tax receipts between England, Wales, Scotland & Northern Ireland', results and methodology note (http://www.hmrc.gov.uk/statistics/receipts.htm).

Appendix 3 – Comparison of alternative medium-term forecasts

Over the last 12 months a number of organisations have published estimates of the medium-term fiscal balance that an independent Scotland might have. Some of these (including the estimates presented earlier in this briefing note) are summarised in Table A.4. Our projections are very similar to those produced by John McLaren and Jo Armstrong of the Centre for Public Policy for the Regions; this is true both for those based on data from the OBR's March 2013 *Economic and Fiscal Outlook* and those using the March 2014 *Economic and Fiscal Outlook*.[46] Both these sets of forecasts suggest that the medium-term outlook for Scotland has strengthened since March 2013. Two factors contributed to this. First, the OBR now expects the UK economy to bounce back more quickly from the recession and so the headline deficit will fall more rapidly. Second, the UK government has pencilled in a further squeeze on public spending in 2018–19, which serves to strengthen the public finances of Scotland (under the assumption – made by us and CPPR – that the government of an independent Scotland would also choose to implement these cuts).

Table A.4. Comparison of forecasts for Scotland's net fiscal deficit (% of GDP)

	2012–13	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*2017–18*	*2018–19*
Forecasts using data from March 2013 Economic and Fiscal Outlook:							
CPPR, Mar 2013	7.5	6.9	6.6	6.6	5.1	4.4	–
IFS, Nov 2013 (basic)	7.0	7.2	6.7	6.6	5.1	4.3	4.3
Scottish Government, Nov 2013	–	–	–	–	1.6–3.2	–	–
Forecasts using data from December 2013 Economic and Fiscal Outlook:							
IFS, Feb 2014	6.8	7.9	7.1	6.3	5.2	3.6	2.5
Forecasts using data from March 2014 Economic and Fiscal Outlook:							
CPPR, Mar 2014	–	8.6	8.2	6.9	5.5	4.0	2.9
Scottish Government, May 2014	–	–	–	–	–0.6–2.8	–	–
IFS, Jun 2014 (baseline)	8.3	8.8	8.3	6.9	5.5	3.9	2.9

Note: "–" indicates that figures for this year are not available from a particular source.
Source: IFS figures are taken from: M. Amior, R. Crawford and G. Tetlow (2013), *Fiscal sustainability of an independent Scotland*, IFS Report, R88; R. Crawford and G. Tetlow (2014), *The next five years look better but tough fiscal choices remain for Scotland*, IFS Observation; Figures 8–10 of this briefing note. Scottish Government figures are from: Scottish Government (2013), *Scotland's Future*; Scottish Government (2014), *Outlook for Scotland's Public Finances and the Opportunities of Independence*.

[46] The March 2014 figures from the CPPR were used by HM Treasury as the starting point for their long-run projections for Scotland's fiscal balance, see HM Treasury (2014), *Scotland analysis: Fiscal policy and sustainability*.

CPPR figures are taken from: Table 4 of J. McLaren and J. Armstrong (2013), *Analysis of Scotland's past and future fiscal position*, CPPR Briefing Paper; the "K&S" scenario presented in Table 4 of J. McLaren and J. Armstrong (2014), *Analysis of Scotland's past and future fiscal position*, CPPR Briefing Note.

The forecasts published by the Scottish Government suggest a lower net fiscal deficit for Scotland in 2016–17 than was suggested by us or by CPPR at a similar time. There are three main reasons for the differences between our projection and that of the Scottish Government:

- The Scottish Government figures incorporated higher forecast revenues from oil and gas production.
- The lower bound figures published by the Scottish Government (and shown in Table A.4) assume that Scotland inherits less than a population share of debt. We and CPPR have also produced forecasts that incorporate alternative assumptions about the sharing of debt (see, for example, Figure 6 in this briefing note) but these are not summarised in Table A.4.
- The method for projecting the apportionment of UK revenues between Scotland and the rest of the UK in future years differs. We assume, essentially, that per capita revenues grow at the same rate in Scotland and the rest of the UK up to 2018–19. In contrast, the Scottish Government projections assume that total revenues grow at the same rate. Since the Scottish population is projected to grow less quickly than that of the rest of the UK over this period, this means revenues per person grow more quickly in Scotland than in the UK under the Scottish Government's methodology. It also means that their methodology has higher projected revenue growth than under our methodology. The difference between our June 2014 forecast for onshore revenues and the Scottish Government's forecast from May 2014 is £500 million (or around 0.3% of Scottish GDP).