CPPR 2010 PROJECT

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Centre for Public Policy for Regions

ANALYSIS OF GOVERNMENT EXPENDITURE AND REVENUES IN SCOTLAND (GERS) 2006-07 PUBLICATION

Main points and Executive Summary

Main Points

1. The first fundamental review of GERS since it achieved National Statistics status in 2005 has resulted in a number of methodology changes but none of these have radically altered the results of the analysis of Scotland's fiscal balance. Scotland still has a substantial non-oil deficit (around -£10bn) and a balance including North Sea revenues that varies significantly in line with these extra revenues.

2. In the latest year (2004-05) for which there is data from both this edition of GERS and the previous edition, there has been a £2.2bn reduction in the non-oil deficit (moving from -£11.2bn to -£9bn). £1.3bn of this revision came from the review of methodology and £0.9bn from data revisions that would have occurred in the normal course of updating GERS.

3. The introduction of a current fiscal balance, now shown along side the total fiscal balance, is a welcome addition but should not divert attention from the principle sign of healthy public finances. In the end, funding needs to be found for both current and capital expenditure. It is not credible to sustain a significant long-term total fiscal deficit, hence the use by the EU and most individual countries of the total fiscal balance as the indicator of choice in this field.

4. Updated information on North Sea revenues, and Scotland's hypothetical share of these, is also very welcome. The new analysis by Kemp and Stephens gives an interesting insight into past and possible future production and revenue shares and levels. Their analysis illustrates the likely difficulty of Scotland building up any 'Oil Fund' similar to Norway's, unless (i) prices remain very high (much higher than in Kemp and Stephens 'high price' scenario), or (ii) the non-oil deficit is narrowed allowing for more North Sea revenues to be saved rather than used to balance the books.

5. The information contained in GERS gives a good grounding for discussion of Scottish public finances matters leading up to the proposed 2010 referendum. It highlights the large gap in funding, excluding potential North Sea revenues, under existing tax and spend policies affecting Scotland. It also highlights the pivotal role of North Sea revenues in how to close this gap and/or how to potentially invest some of these funds for future years.

Executive Summary

FISCAL BALANCE WITHOUT NORTH SEA REVENUES

- The Scottish fiscal balance for 2006-07, excluding revenues from the North Sea region, is estimated to be -£10.2bn
- This non-oil fiscal balance shows a trend growth over the 5 year period calculated, from -£8bn in 2002-03 to -£10.2bn in 2006-07

FISCAL BALANCE WITH NORTH SEA REVENUES

- At a geographical related share of around 83% of North Sea revenues, the deficit falls to -£2.7bn in 2006-07
- The fiscal balance including North Sea revenues does not show a consistent pattern over time due to the erratic nature of these revenues

CURRENT AND CAPITAL SPEND WITHIN THE TOTAL FISCAL BALANCE

- For the first time GERS shows the fiscal balance split between current and capital expenditure. This makes it consistent with the presentation of such balances used in the UK Treasury's Budget Report
- This is a positive step presentationally. However, our analysis will continue to concentrate on the total fiscal balance which includes both current plus capital expenditures and which is more in line with the headline figures used by most governments and international bodies like the EU

CHANGES TO GERS FOR 2004-05

- The main revisions to the 2004-05 data presented in the 2006-07 publication are that (i) the data allocation has been refined so that, for example, more expenditure is now 'allocated' by country throughout the UK and as a consequence there is less 'unallocated' expenditure to be estimated between countries, (ii) the methodology has changed, principally on the revenue side
- These differences mean that the new estimate for the 2004-05 (the latest year covered by both this and the last editions of GERS) fiscal balance, excluding North Sea revenues, is -£9.1bn as opposed to the old estimate of -£11.2bn (ie, a reduction of £2.1bn, in the size of the deficit). This difference is roughly made of reductions of £700mn to both expenditure on services and to the Accounting Adjustment as well as an increase of £800mn to revenues.

WIDER IMPORTANCE OF GERS

- The balance including the North Sea sector for years beyond 2006-07 is unclear due to uncertainty over future oil and gas prices and production
- The data should be viewed as a starting point in the discussion on Scotland's fiscal options in relation to the Calman Review and the proposed 2010 referendum. There exist a variety of ways of (i) reducing the non-oil fiscal deficit and (ii) using the North Sea revenues, which mean that the future picture of a Scottish fiscal balance could look very different to that shown in GERS

BACKGROUND

Since 1992 the Scottish Office, then the Scottish Executive and now the Scottish Government, have been publishing a form of GERS. The first version was a one-off but since 1995 (which covered expenditure and revenue data for financial year 1993-94) it has been an annual publication (with the single exception of last year).

The stated aim of GERS is to ***"enhance public understanding of fiscal issues in Scotland***", with its primary objective being ***"to estimate a set of fiscal accounts for Scotland through detailed analysis of official UK and Scottish Government financial statistics".***

While the publication itself is of limited use in understanding Scotland's public finances it has nevertheless received a lot of attention since its inception, both in the press and from political parties in Scotland. This commentary is not about the politics of GERS; instead it concentrates on the quality of the data used, the methodology used, the outcomes and the implications for Scotland.

There have been revisions to GERS over time, but in general terms it has changed little both in terms of methodology or final out-turn. However, last year it was decided to delay the publication of GERS in order to allow consideration in detail of the comments and evidence presented to the Scottish Parliament Finance Committee on GERS to be reflected in an already on-going review of the data and methodology used to compile it.

GERS is not currently used for any specific purpose by the UK or Scottish Government. Neither is a similar document available for any other constituent country or region of the UK.

The remainder of this Briefing Paper contains sections on:

- The overall fiscal balance
- The review of GERS impact on Scotland's fiscal balance
- Scottish public expenditure
- Scottish public revenues (excluding the North Sea region)
- North Sea public revenues
- The bigger picture and the 2010 referendum

OUR APPROACH

The latest GERS publication (June 2008) provides data for the period 2002-3 to 2006-07. The previous publication, in December 2006, covers the years 2000-01 to 2004-05. Combined, the two publications allow us to consider changes in both (a) the underlying revenue and expenditure data used as well as (b) changes in the methods used in moving from UK to Scottish figures.

As we will see, on the expenditure side data have recently been revised in the April 2008 PESA[1] published by HM Treasury, and this now becomes the standard for allocating public expenditure across the countries of the UK. Whereas on the revenue side, the data remains largely unrevised and instead we highlight where Scottish Government economists have revised either the source or size of the Scottish share of UK revenues.

Hence, the analysis presented here focuses on three aspects of the new GERS 2008 figures, compared to the 2004-05 published figures:

i) an update for the two most recent years of new data (2005-06 to 2006-07)
ii) an assessment of what the GERS 2008 headline figures would have been using the old GERS methodology (that is, looking at differences caused only by updates to expenditure and revenue figures for the UK and Scotland)
iii) an assessment of any differences to the GERS 2008 headline figures from differences in the underlying methodology used by the Scottish Government economists and statisticians between the two versions of GERS.

The purpose of this focus is to allow the reader to be able to judge:

- the trend movements from 2002-03 to 2006-07 in Scotland's fiscal balance, both including and excluding a proxy for North Sea related revenues

and

- the degree to which changes made in this GERS (vs the previous, for 2004-5, GERS) are due to (i) changes in the underlying UK data that would have occurred regardless of any methodological review of GERS, and (ii) changes due to methodological revisions carried out as a result of this recent review.

Charts A-B best illustrate the effects we are trying to highlight by showing data for Scottish total expenditure, total revenue, and fiscal balances:

1) taken from GERS 2006 (the publication date for the previous report covering financial year 2004-05 - designated here as **GERS 06**)
2) taken from GERS 2008 (designated here as **GERS 08**)
3) using the new data from GERS 2008 but applying the old methodology from GERS 2006 (designated here as **GERS 06 Updated**)

[1] A glossary at the end of this document provides definitions and the sources of the datasets used.

In this way the charts emphasise whether it is data changes (as seen in the difference between (1) and (3) above) or methodology changes (the difference between (2) and (3) above), that have dominated the overall changes in each category.

(NOTE: CPPR's delineation of what is a 'methodology change' brought about by the review of GERS and what is a 'data change', which would have come about in the normal process of updating GERS, is largely consistent with the approach taken in Appendices A and B of the latest GERS report (see for example Tables B.10 to B.12). However, there are some, relatively minor areas, where the two assessments may differ.)

The new GERS report (unlike its predecessors) also makes much of the distinction between what is termed the overall fiscal balance (the difference between total expenditure and total revenue in Scotland) and the current fiscal balance (which excludes most capital spending). We mostly concentrate here on the overall fiscal balance as we are considering GERS within the current fiscal framework for Scotland, and not one where there is greater/total fiscal autonomy. The GERS document itself (p. 20) states that Scotland receives a grant from the UK government (via the Barnett formula) determined by the UK Comprehensive Spending Review process, and the Scottish government is then free to decide how to spend on both current and capital services up to the limit of this grant. This current framework in which GERS operates therefore provides information on how much of the total expenditure undertaken in Scotland is met from an estimate of revenue attributed to the Scottish tax base (plus any operating surpluses from government owned assets and – when included – the tax revenues from North Sea oil that is extracted from Scottish territorial waters).

Of course in the future, if there is greater fiscal autonomy and/or independence, Scotland would presumably have to raise its own revenue to meet planned expenditures (current and capital) on public services. Then to meet any shortfall between total expenditure and total revenue, it would have options such as (i) raising tax rates; (ii) borrowing from the capital market; and/or (iii) using North Sea tax revenues. However, the overall fiscal balance must still be maintained in that total spending must be financed.

Lastly, it has been argued (see also Box 3.1 in the GERS document) that there is an important distinction between current revenue and current spending – which measures the cost to current taxpayers of the public services they use, including debt interest payments for the stock of debt accumulated from previous borrowing – and spending on capital assets which benefit future tax payers. From this is argued that capital assets can (and perhaps should be) financed from borrowing and therefore what matters more in terms of fiscal balance is current fiscal balance excluding capital spending (which is "… ***an important indicator of intertemporal fairness… and indicates the sustainability of current policies***" GERS, Box 3.1, p. 25). A number of issues arise here: firstly, there is an implication that capital assets are for future public consumption of services but in fact current taxpayers derive the benefits from road, rail, public housing, education, health services, all of which require large amounts spent on infrastructure. It is just that such assets are not consumed within the current period (they are consumed over a number of years before needing replacement) but they still need to be purchased in their entirety for current and future taxpayers to benefit from the services they provide.[2]

Secondly, even if capital spending was mostly or entirely financed from borrowing, the ability to raise these funds and/or the interest cost of debt repayments will be affected by the overall amount spent on capital relative to the surplus generated on the current fiscal balance. Ultimately, borrowing must be repaid and lenders will consider the overall size of past accumulated debt as well as likely current surpluses over a period of time.

Finally, and following on from this last point, the EU and most countries use either the public sector or the general government fiscal balance as the bottom line for the sustainability of imbalances. Hence, the Maastricht criteria of 3% of general government borrowing as a share of GDP limit.

[2] An option would be for the government to rent such assets from the private sector each fiscal year, and only pay during that year the cost of the services provided. However, most public sector assets are not (or cannot) be rented in this fashion – even with recourse to PFI.

OVERALL SCOTTISH FISCAL BALANCE

The latest estimate of the Scottish fiscal balance for 2006-07, excluding revenues from the North Sea region, is estimated to be -£10.2bn. This is equivalent to 9.7% of Scottish GDP (£105bn in 2006-07). By comparison the UK had a non-oil deficit equivalent to 4% of GDP in the same year. This non-oil fiscal deficit shows a trend growth over the 5 year period calculated, from -£8bn in 2002-03 to -£10.2bn in 2006-07. (See Chart A.)

When revenues from the North Sea sector are included this deficit is reduced. However, the extent of reduction depends on the share of the North Sea revenue that is considered to be appropriate for Scotland. At 83%, the geographical share used in GERS, the deficit falls to -£2.6bn in 2006-07. This is equivalent to 2.1% of Scottish GDP (£127bn in 2006-07, including 83% of North Sea GDP). By comparison the UK including the North Sea had a deficit equivalent to 2.3% of GDP in the same year. The fiscal balance including North Sea revenues does not show a consistent pattern over time due to the erratic nature of these revenues. (See Chart A.)

Charts B and C show the trends in overall Scottish expenditure and revenues which lead to these balances. They also illustrate the degree to which changes to the fiscal balance in 2004-05, or before, were due to data changes or changes in methodology used for GERS. As can be seen, on the expenditure side most of the difference is due to data revisions (since there is little difference between the GERS 06 Updated and the GERS 08 figures) while on the revenue side most of the difference is due to methodological changes (since the major differences in the revenue figures are between GERS 06 Updated and GERS 08). Overall the fiscal balance estimate for 2004-05 is around £2.2bn smaller now than it was at the time of the previous GERS.

In comparison to the UK as a whole, Scotland's fiscal deficit, including an 83% share of North sea revenues, can be seen to be relatively smaller than the UK's, in terms of as a share of GDP. However, this is only true for the years 2005-06 and 2006-07; before that the reverse was the case. In terms of the Maastricht Treaty "3% of GDP" rule, Scotland would probably be inside for 2005-06 and 2006-07, but outside in earlier years. (See Chart D)

These comparisons emphasise the importance of North Sea revenues in understanding where Scotland's fiscal balance stands in an international context.

Chart A: Scotland's Fiscal Balance £bn

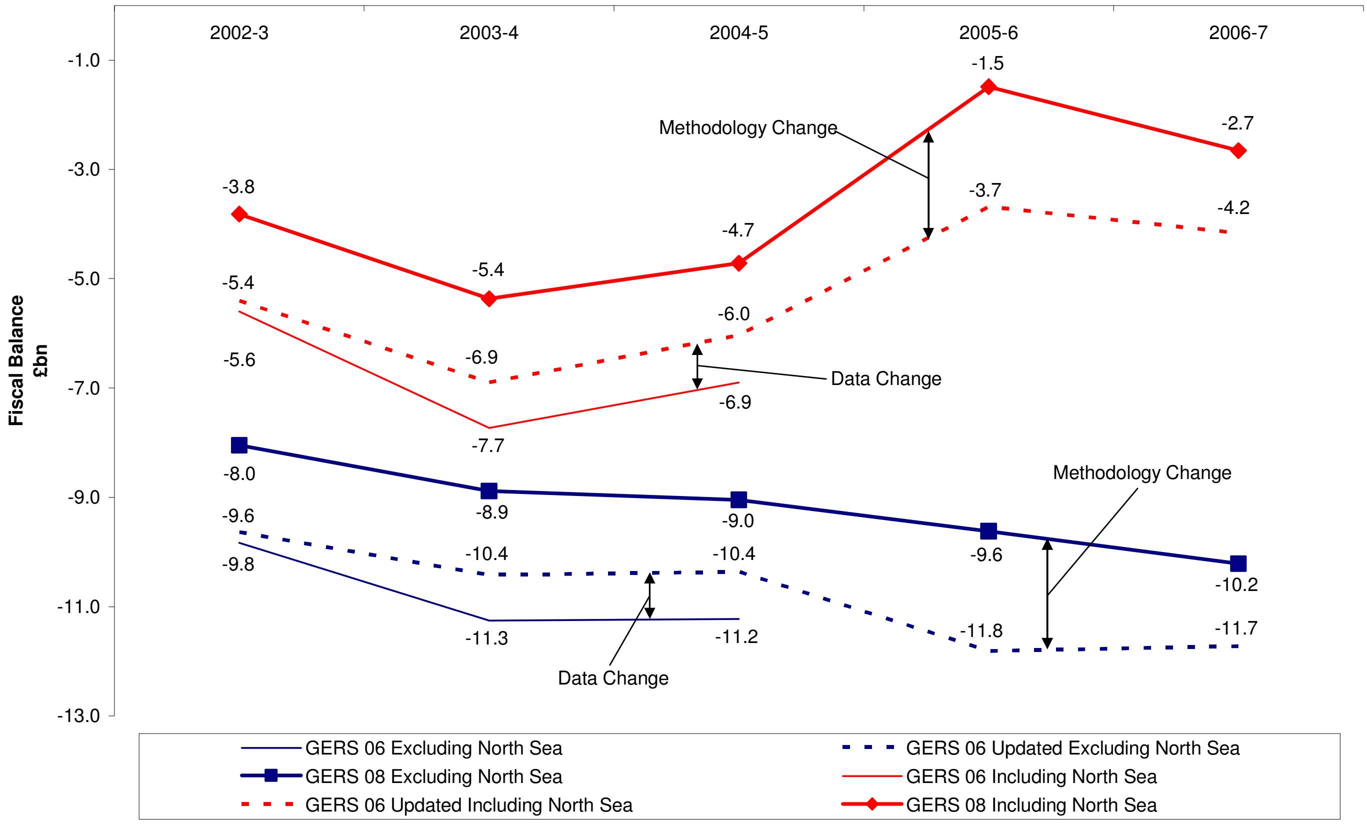


Chart B: Expenditure, Scotland £bn

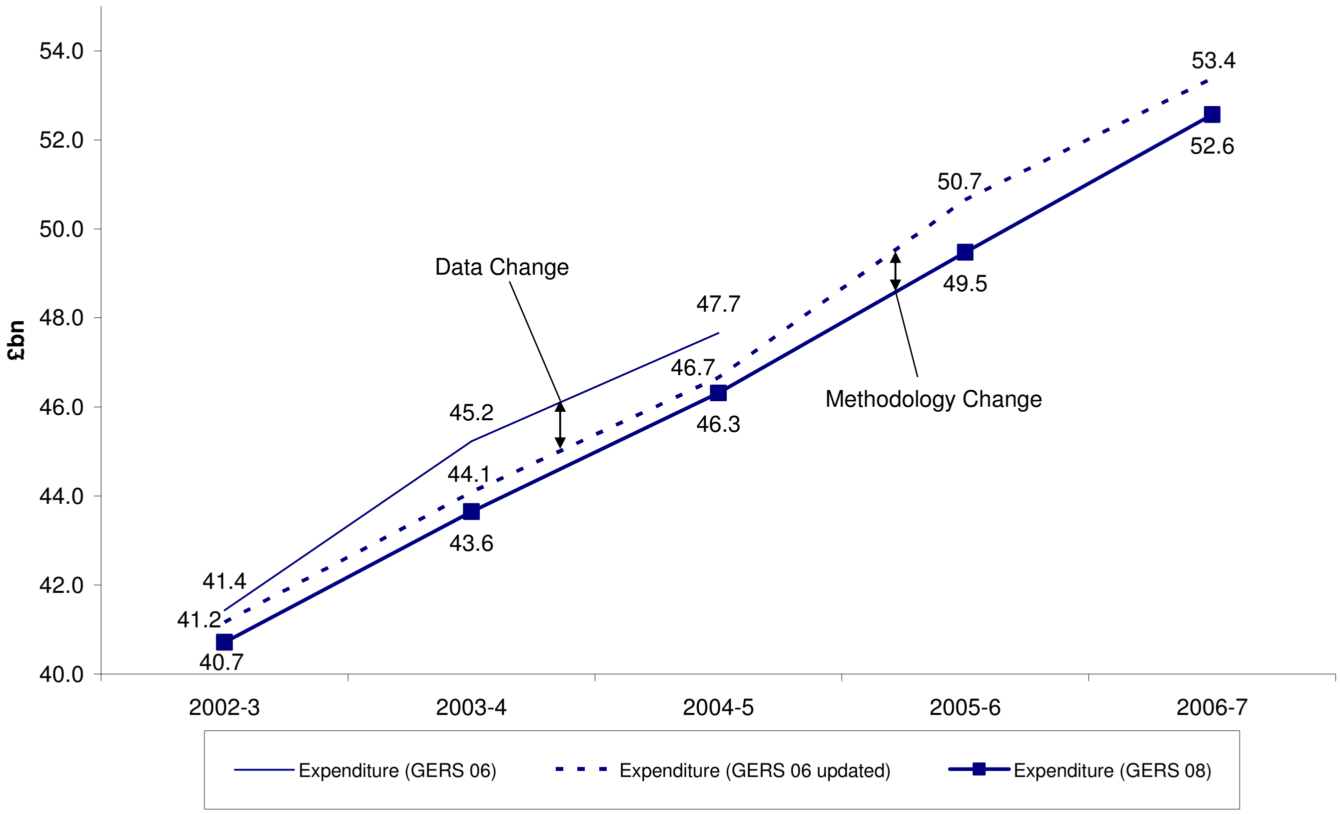


Chart C: Revenue, Scotland £bn

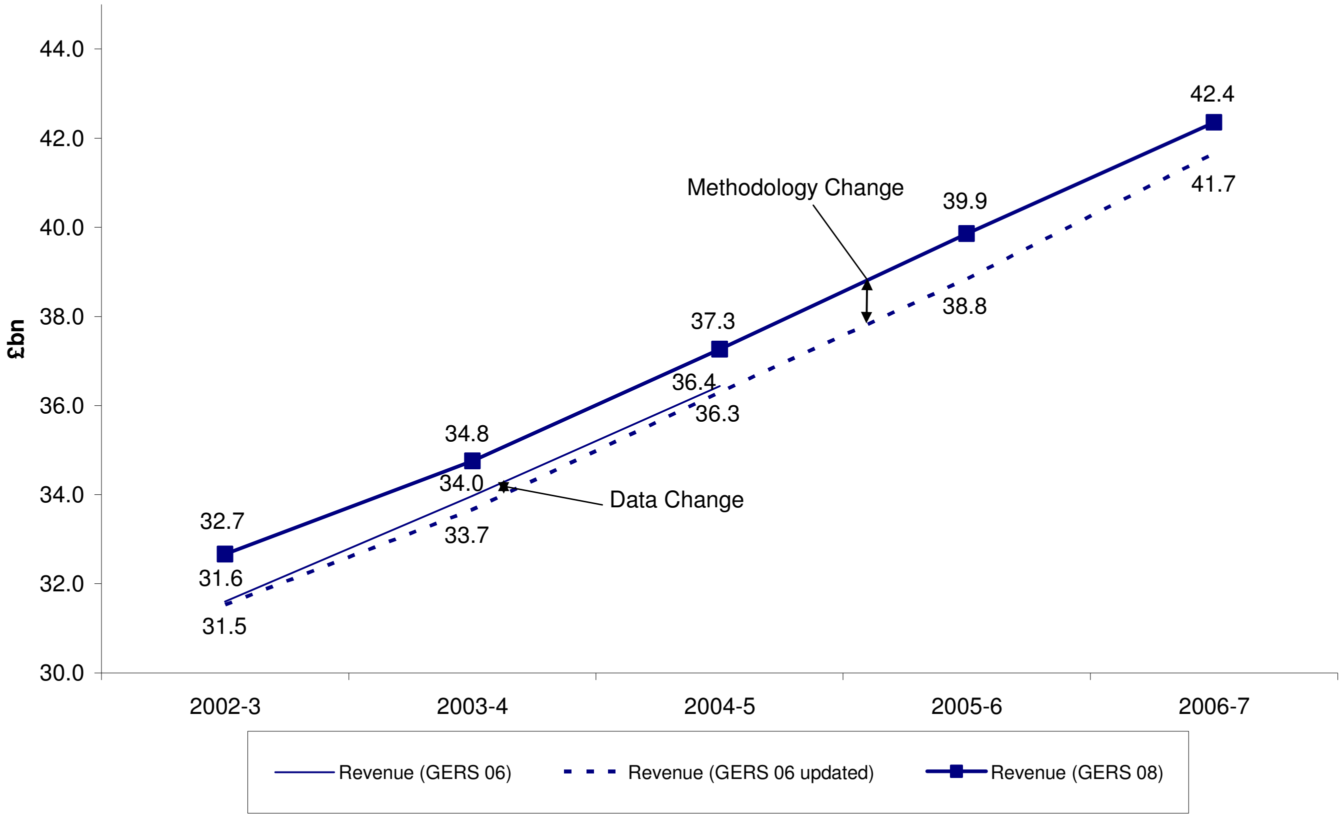
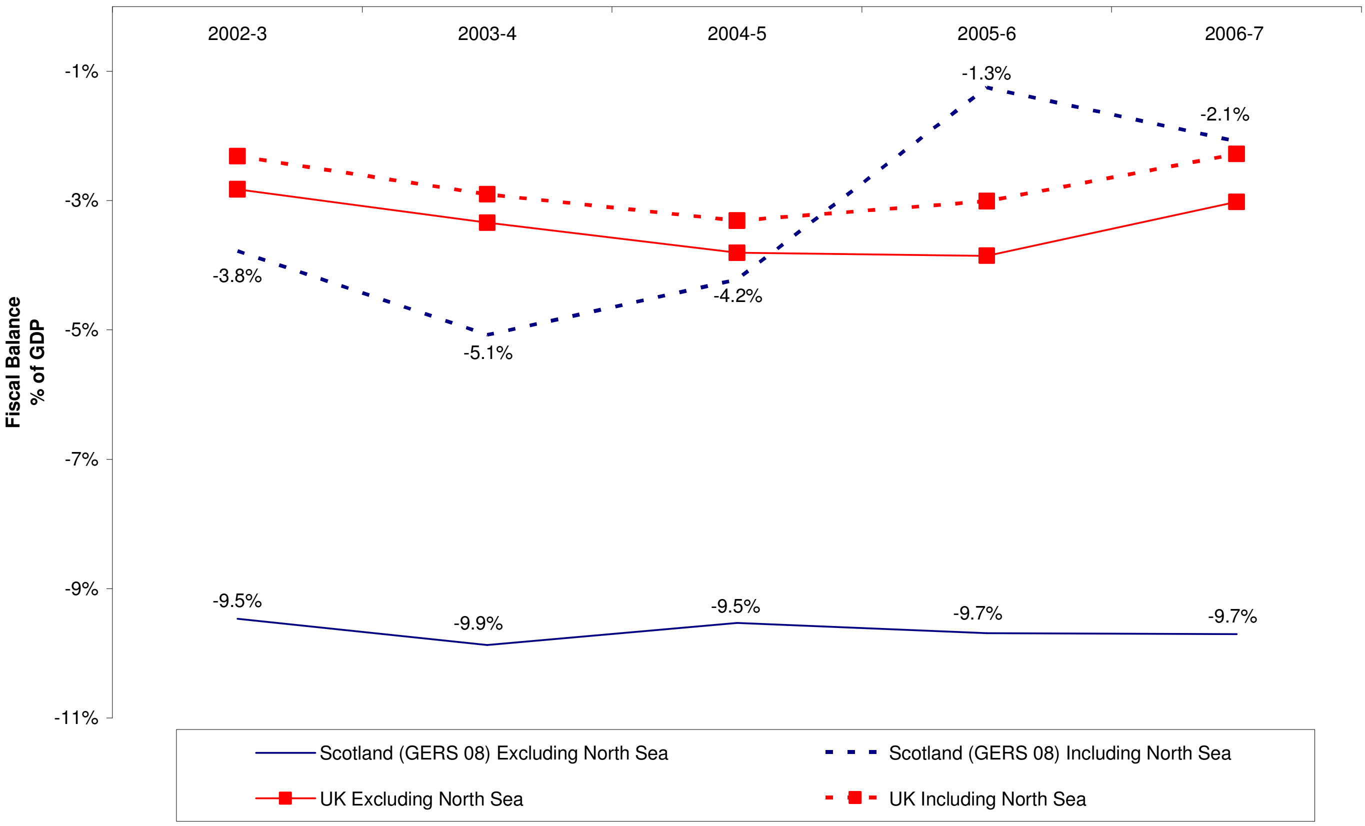


Chart D: Fiscal balance as a % of GDP, Scotland and UK



REVIEW OF GERS IMPACT ON SCOTLAND'S FISCAL BALANCE

One of the most important aspects of the current edition of GERS is the impact of the review of its methodology has had on the results. This can only be judged by separating out these methodological changes from data revisions that would have taken place as part of the usual updating of GERS procedure.

Of course this comparison is confined to years covered by both the latest GERS report and the previous GERS report, i.e. for 2002-03 to 2004-05. Here we will concentrate on the impact on the last year of such comparable data 2004-05.

Main changes to the fiscal balance for 2004-05 are shown in Table A.

Table A: Changes to main components of non-oil fiscal balance for 2004-05, £bn

	GERS 06	GERS 08	Difference	Data	Methodology
Revenues - Total	36.44	37.26	0.82	-0.14	0.97
Expenditure - Total	47.66	46.31	-1.35	-1.00	-0.35
Identifiable	***38.58***	***38.02***	***-0.56***	***-0.71***	***0.15***
Non-identifiable	***6.18***	***6.05***	***-0.13***	***-0.19***	***0.05***
Accounting Adjustment[3]	***2.90***	***2.24***	***-0.66***	***-0.11***	***-0.55***
Fiscal Balance	-11.22	-9.05	2.17	0.86	1.32

Table A illustrates that:

- most of the revisions on the revenue side were caused by methodology changes resulting from the review of GERS
- most of the revisions on the expenditure side were caused by data changes resulting from the normal PESA related updating process
- of the £2.2bn reduction in the non-oil fiscal deficit for 2004-05, most was down to expenditure revisions but revenue revisions also contributed significantly
- the biggest single contributor to the reduction was from methodology revisions to non-oil revenues, principally due to increases in VAT and Fuel Duties receipts.

While a revision of £2.2bn out of a total of £11.2bn can be viewed as very large (almost 20%), it should be remembered that this is a revision of a balance. In terms of the two sides of this balance the revisions are relatively small, between 2-3% in each case[4].

In addition the reduction of the fiscal deficit, while quite large, does not change Scotland's underlying position of having a significant (around 10% of GDP) non-oil deficit.

[3] The large methodology revision seen in the Accounting Adjustment (-£0.55bn) can be misleading. In fact such a revision is netted off on the revenue side by the same change to the Gross Operating Surplus. However, such a reduction of £550mn is not seen in this revenue line of the new GERS as it is compensated for by an increase (unrelated) in Scottish Water's attributed profits.

[4] Total revisions as a share of total expenditure and revenue would be higher, as some revisions are netted off.

SCOTTISH EXPENDITURE

Total Expenditure

Government expenditure in Scotland is estimated to have risen to £52.6bn in 2006-07, including the Accounting Adjustment (see Chart B). This amounts to a 9.6% share of the UK total, 1.2 percentage points above Scotland's population share, (or equivalent to an extra £5.4bn over its population share).

Changes in data from GERS 2004-05

Since the last publication of GERS, statisticians at HMT have considerably revised the data allocated by country (and region) across the UK. (See PESA 2008, Chapter 9.) In particular the share of total government expenditure that is identifiable by country has risen and the share that is non-identifiable has fallen. Most of this re-allocation has been to England.

For example, for 2004-05, the PESA data used in the last GERS publication and the current one differed as shown in Table B. This table also shows that the increase in identifiable expenditure in England comes partly through a reduction in the non-identifiable expenditure total for the UK, and partly through a further increase in identifiable expenditure (hence the bottom line increase in Total expenditure). In contrast identifiable expenditure in Scotland has gone down, by £700mn.

Table B – Expenditure by country for 2004-05, £bn

	PESA'06	PESA'08	Difference
England	318.6	322.8	+4.2
Scotland	38.6	37.9	-0.7
Wales	21.4	21.6	+0.2
N. Ireland	14.1	14.2	+0.1
Identifiable Total	392.7	396.4	+3.7
Non-Identifiable	75.6	73.8	-1.8
Accounting Adjustment	22.7	22.0	-0.7
Total	491.0	492.2	+1.2

It is also worth considering how identifiable expenditure is now apportioned across Scotland, by function, between the PESA of 2006 and of 2008.

Table C: Identifiable expenditure in Scotland, by function, 2004-05 (£mn)

	PESA 06 (1)	PESA 08 (2)	Difference (3)	Per-head 2006 (4)	Per-head 2008 (5)
General Public Services	841	924	+83	173	160
International Services	20	20	-	--	--
Defence	2	6	+4	--	--
Public Order and Safety	1,911	1,925	+14	94	86
Enterprise and Economic Development	625	933	+308	113	170
Science and Technology	238	199	-39	162	135
Employment Policies (social protection)	802	293	-509	259	110
Agric, Fish and Forestry	631	657	+26	143	143
Transport	1,672	1,546	-126	126	117
Environmental Protection	782	788	+6	145	136
Housing and Community Amenities	1,279	946	-333	191	142
Health	7,683	7,705	+22	110	111
Recreation, Culture and Religion	931	915	-16	165	160
Education and Training	5,892	6,086	+194	106	110
Social Protection	15,271	14,932	-339	111	109
Total	38,581	37,876	-705	116	113

Table C, columns 1-3, shows that there have been both reallocations across service functions (for example, most of the reduction in Employment Policies expenditure is offset by the increase in Enterprise and Economic Development, due to the reallocation of Scottish Enterprise and Highlands and Islands Enterprise expenditure) as well as an overall fall of £700mn in the total identifiable expenditure in Scotland (roughly half of which can be explained by the fall in non Scottish Government Social Protection payments).

Table C, columns 4-5, illustrate how these changes have affected relative spending per head of population in Scotland (vs UK=100). The only public service where spending in Scotland is lower is Public Order and Safety, which is now very much lower than previously shown, by almost 15%. (Note: this is because much of the increase in identifiable spending in England was due to a re-classification from non-identifiable of prison spend, worth £2bn.) Of the others the big shifts are mainly in Economic Affairs sub-sectors, with Employment Policies and Science and Technology falling, although still well above the UK average, and Enterprise and Economic Development rising.

In total, due to the fall in Scottish identifiable spending and the rise in English identifiable spending, Scotland's overall per head spending advantage has fallen from 116 to 113 in 2004-05. However, it should be noted that this was a low point for this ratio and that since then it has risen, up to 118 in 2007-08 (see PESA 2008, Table 9.2).

Methodology issues and changes from GERS 2004-05

There are a number of areas of dispute with regards to what expenditures should be allocated to Scotland. The GERS report highlights some of these in a series of Boxes e.g. Box 6.5 on nuclear power decommissioning expenditure. Appendix B also highlights a number of specific changes in the data, in some cases either updating or diverging from the latest PESA data available.

One area that is unchanged but has been contentious in the past is expenditure on Defence (see Box 6.6). In GERS this is attributed on a population basis (8.4%), on the assumption that each citizen benefits equally from the services provided by the Armed Forces. However, if instead Defence expenditure were to be attributed by where the expenditure occurred, when within the UK and in terms of both procurement and personnel, then this share might fall to around 6% (this is equivalent to about £700mn in expenditure).

Apart from the above, the main changes in methodology since GERS 2004-05 have been in terms of the shares apportioned to Scotland of UK non-identifiable expenditure.

These shares are identified in Table D below:

Table D: Scottish share of Non-Identifiable expenditure, 2004-05 and 2006-07

	GERS 06*	GERS 08	GERS 08 £bn
EU transactions	39.5%	19.9%	-350
Science and technology	8.2%	7.5%	88
Environment protection	8.2%	7.4%	129
Total	8.2%	8.2%	6,761

* note that these shares refer back to 2004-05

Net impact of data and methodological changes

Table E shows, for 2004-05 the impacts of both data and methodological changes by service function.

On the methodology side the most important change has been in Housing and Community and this has been caused by a revision to Scottish Waters capital expenditure, which had been incorrectly entered in PESA. (Note: this is a good example of a change that could come under the category of 'data' or 'methodology'. It, and those like it have been included under 'methodology' here on the basis that they may not have been discovered without the fundamental review that took place.

(The substantial 'data changes' are already discussed above.)

Table E: Main sources of change to Scottish expenditure 2004-05 (excluding Accounting Adjustment)

	GERS 06	Data changes ie, GERS 06 Updated)	Methodology changes	GERS 08	Diff
General Public Services	1,476	-96	-14	1,366	-110
EU Transactions	-316	-36	20	-332	+16
International Services	480	-10	-1	469	-11
Debt Interest	2,086	32	-4	2,114	+28
Defence	2,431	118	-5	2,544	+113
Public Order and Safety	2,317	-234	-1	2,082	-235
Enterprise and Economic Development	679	268	1	948	+269
Science and Technology	295	-27	-2	266	-28
Employment Policies	803	-509	0	294	-509
Agric, Fish and Forestry	666	-9	0	657	-9
Transport	1,705	-133	-12	1,560	-142
Environmental Protection	825	-33	-96	696	-129
Housing and Community	1,279	-333	319	1,265	-14
Health	7,737	7	-1	7,743	+6
Recreation, Culture and Religion	950	245	-3	1,192	+242
Education and Training	5,892	196	0	6,088	+197
Social Protection	15,457	-338	0	15,119	-338
Total	44,762	-892	201	44,071	-691

Accounting Adjustment

The Accounting Adjustment is given very little prominence in GERS, even though it has been considerably revised. Essentially it is an adjustment made in order to align Total Expenditure on Services (TES) with Total Managed Expenditure (TME). (See pages 72-73 of GERS 2008.) It consists mainly of general government capital consumption and certain VAT refunds, which are not included in TES.

The latest edition of GERS has also seen a large revision in the Accounting Adjustment. However, this adjustment has a corresponding offset in the Gross Operating Surplus line of total revenues and so does not impact on the overall Fiscal Balance. (Note: this does not actually show up in a reduction in this revenue line as there is a roughly equal and opposite signed (but unrelated) adjustment for Scottish Water profits.)

SCOTTISH REVENUES

Total Revenues (excluding the North Sea)

Government revenues raised in Scotland are estimated to have risen to £42.4bn in 2006-07 (See Chart B). This amounts to an 8.3% share of the UK total, 0.1 of a percentage point below Scotland's population share (8.4%) and 0.2 of a percentage point above its GVA share (8.1%).

Changes in data from GERS 2004-05

The data remains almost unchanged from that originally used in GERS 2004-05. The UK totals are consistent with those shown in the Budget Report 2008, Table C6.

Methodology issues and changes from GERS 2004-05

Unlike the expenditure side there have been a number of disputed areas on the revenue side in terms of the most appropriate share to use for Scotland when apportioning total UK revenues. The principal ones are:

Income Tax – where the GERS share for Scotland estimate (7.3%) is derived from the HMRC's Survey of Personal Incomes (SPI). However, this is acknowledged to be much lower than its population share (8.4%) or its GDP (excluding extra-regio) share (8.1%). Beyond SPI figures are only available for median gross weekly earnings, and not at all for pensioner incomes and the self-employed. It is therefore very difficult to provide conclusive proof as to whether or not the SPI share for Scotland is too low.

However, it is worth noting that the Scottish share was around 8% up to 1997-98 before it dropped to 7% in 1999-2000. This sudden drop has never been properly explained.

Corporation Tax (excluding the North Sea) – where GERS acknowledges that ***"this tax is exceptionally difficult to estimate for Scotland due to both conceptual difficulties and a lack of data.***" This has always been the case in terms of UK wide companies with headquarters in either Scotland or elsewhere in the UK. This difficulty is exacerbated by the recent activities in the financial services sector in terms of international expansions and takeovers. Currently the Scottish share stands at 8.1%, the same as its GDP share.

Again, it is worth noting that in GERS 2002-03 Scotland's share was declining from 8.8% to 8.2% (1998-99 to 2002-03), while in GERS 2003-04 it was flattish at 9.5-9.7% (1999-2000 to 2003-04), before returning to a downward trend from 8.5% to 8.1% (2000-01 to 2004-05) in GERS 2004-05. None of these patterns have been properly explained.

VAT – where the GERS share for Scotland (8.5%) is based on an analysis of UK household expenditure data from the ONS Expenditure and Food Survey.

In the past Scotland's share of VAT has been estimated in GERS to vary quite considerably, from a peak of 8.9% in 1994-95 down to 7.9% in 1997-98, then back up to 8.4% in 1999-2000. It is currently on a slowly rising trend, in contrast to Scotland's slowly declining population share trend.

Fuel Duties – where the old GERS share (5.6%) was based on data on inland fuel deliveries from the Digest of Energy Statistics. Some believe this figure to be too low, especially given the relative size of Scotland and the fact that Scotland is estimated to have 9% of UK traffic.

This share was also much lower than in the past. For 1996-97 the GERS share stood at 7.2% and even in 2000-01 it was still up at 6.7%, before falling to 5.7% in 2001-02. The new GERS methodology raises this share to 8.3%, based on a regional breakdown of UK road traffic fuel consumption in turn based on weighted traffic flows from a sample of roads.

Part of the reason for reductions in Scotland's share of revenues over time can be attributed to its lower population share of the UK as a whole. However, over the period 1996-97 to 2006-07 this only fell from 8.7% to 8.4% and so in some of the above cases such a fall does not explain even the majority of the decline in Scotland's share.

The area of greatest concern remains Income Tax. If Scotland's share were to equal that of its population then this would result in a further £1.5bn being attributed to Scotland. Given the uncertainty over past drops in Scotland's share of income tax, this subject seems ripe for further analysis.

Table F below breaks down total Scottish revenues to its main constituent parts. It illustrates the importance of a few major revenue sources, so that the biggest seven sources account for over 80% of the overall total. It also illustrates the most important changes in shares attributed to Scotland as against the previous GERS.

Table F: Main sources of Scottish revenue 2006-07 (excluding the North Sea region)

	Scottish Revenue	Scottish share of UK GERS 08	Scottish share of UK GERS 06*
Income tax	10,338	7.3%	7.3%
VAT	7,449	8.5%	8.1%
Social security contributions	7,464	8.2%	8.3%
Corporation tax (exc NS)	3,019	8.1%	8.1%
Non-domestic rates	1,833	9.2%	9.6%
Council Tax	1,812	8.1%	8.1%
Fuel Duties	1,958	8.3%	5.6%
Gross trading surplus, etc	2,757	13.0%	12.5%
Total Revenues	42,353	8.3%	8.1%

* note that these shares refer back to 2004-05.

Net impact of data and methodological changes

Table G shows, for 2004-05 the impacts of both data and methodological changes by revenue source, and highlights the significant increase in revenues attributable to the methodological changes.

Table G: Main sources of change to Scottish revenue 2004-05 (excluding the North Sea region)

	GERS 06	Data changes	Methodology changes	GERS 08	Diff
Income tax	8,914	59	-181	8,792	-122
Corporation tax (exc NS)	2,422	-13	-20	2,389	-33
VAT	5,949	-31	793	6,711	+762
Social security	6,461	21	99	6,581	+120
Non-domestic rates	1,813	-18	-72	1,723	-90
Council Tax	1,615	13	-13	1,615	-
Fuel Duties	1,313	-7	616	1,922	+609
Stamp Duties	720	-3	-244	473	-247
Other taxes and royalties	978	-7	-432	539	-439
Interest and Dividends	460	-9	143	594	+134
Remaining sources	5,794	-142	276	5,924	+134
Total	36,439	-137	965	37,263	+828

SCOTTISH SHARE OF NORTH SEA REVENUES

Revenues from the North Sea region are currently attributed to the Continental Shelf, a separately identified region, and so to the UK as a whole but not apportioned between constituent parts of the UK. In order to apportion them between regions of the UK an assumption would need to be made on the most appropriate means of doing so. (Note: the Continental Shelf economic activity is identified as being 'extra-regio' in the UK ONS Regional Accounts. In practice a small proportion of extra-regio is not related to the North Sea.)

In the past GERS has shown the impact of Scotland's obtaining 0-100% of North Sea revenues, as well as 66%/75%/90% and its GDP share (8.2%). The general assumption is that, depending on price and output levels with respect to North Sea oil and gas, Scotland's share, based on a geographical split of the Continental Shelf, is likely to lie somewhere between 66-90%.

This range is roughly consistent with the analysis in this area carried out by Alex Kemp and Linda Stephen of University of Aberdeen (the original work was undertaken in 1999 and updated for this GERS 2008 report). Their work found that the sharing out of taxable income in the oil (largely in Scottish waters) and gas (largely in English waters) sectors was dependent upon relative production, relative prices and tax deductions and allowances related to investment and operating expenditures. As a result of these variables, Scotland's share of past tax revenues fell to as low as 61%. However, Kemp and Stephen estimate Scotland's share of total tax revenues from the UKCS is likely to lie between 82.2-83.8% for the period 2002-03 and 2006-07 and is estimated to rise to between 88-90% over the period 2007 to 2013.

Notwithstanding this rising share, total production is also forecast to fall and so, Kemp and Stephen estimate the value of taxes raised in the Scottish sector will amount to £7.2bn in 2008 but fall to around £5.0bn by 2013 (real prices and using their medium price scenario).

(Note: the above discussion of Scotland's changing "share" of North Sea revenues relates only to how this share changes according to shifting price and production patterns. It does not relate to any dispute over what the actual geographical limits of Scotland's "share" might be. Kemp and Stephen's assume a split consistent with using the median line principle.)

In assessing the risk associated with their estimates Kemp and Stephen point out that

"…oil prices have been very volatile and this should remain the case over the next few years. Further, there has been a dramatic cost escalation in all activities in the UKCS, and a continuation of this will adversely affect taxable income. Production has also fallen at a considerably faster pace than forecast only a few years ago and predicting future production is also subject to much uncertainty. There are thus substantial downside risks to the projections made as well as some upside potential from still higher oil prices. The former risks are probably the stronger ones."

Kemp and Stephen, (2008) p35

Total North Sea revenues for 2006-07 are £9.1bn. Table H illustrates how they have varied over time. As discussed above, Scotland's share of these total revenues will also have varied over time so that it is not a simple task to provide a run of 'Scotland only' data.

Table H: North Sea Revenues and geographic shares, £bn, cash terms

Years	Revenue	Kemp-Stephen share for Scotland
1980-81 to 1989-90	65.1	
1990-91 to 1999-00	21.7	
2000-01 to 2008-09	60.2	
Max Yr 1984-85	12.0	
Min Yr 1991-92	1.0	
1999-2000	2.5	
2000-01	4.3	
2001-02	5.2	
2002-03	4.9	83%
2003-04	4.3	82%
2004-05	5.2	84%
2005-06	9.7	84%
2006-07	9.1	83%
2007-08 (est)	7.7	88-90%
2008-09 (proj)	9.9	88-90%

Source: HM Treasury and Kemp and Stephen (2008)

As the above analysis indicates, both the Calman review and the independence debate require a clearer understanding of the size of Scotland's share of North Sea revenues. In particular, the scale of these revenues is crucial to our understanding of Scotland's ultimate fiscal balance.

TOWARDS 2010 – THE BIGGER PICTURE

In terms of the 2010 referendum debate there are essentially two different arguments that need to be considered. The first is what level of non-oil fiscal balance would best suit an independent, or fully fiscally autonomous, Scotland and how would this be best achieved. The second is how to treat oil revenues in terms of both helping fill the existing non-oil deficit and in terms of starting up and contributing to an Oil Fund, which would provide government funds in the future.

The new GERS report, as has always been the case, provides us with a simple static analysis of the position of Scotland's public finances while it remains a constituent country of the United Kingdom. Clearly if this situation were to change, through independence or fiscal autonomy, then this static position would also change, depending on the tax and spend policies under any new arrangement.

The usefulness of GERS lies in suggesting where Scotland stands under the existing tax and spend policies. As such, any changes to current circumstances can be estimated in order to come to a new fiscal balance under these new circumstances. However, the bigger the change, especially on the tax side, the more difficult will be the ability to estimate this change in the longer term (i.e. the dynamic rather than the static impact). So, for example estimating the impact of significantly cutting corporation tax into the future will involve forecasting based on assumptions that could vary considerably, so the actual impact of any such change cannot be known in advance.

GERS is therefore useful in telling us about the fiscal balance (i) under present conditions and (ii) excluding North Sea revenues. This non-oil balance is around -£10bn and is liable to grow slowly in cash terms (though not necessarily in real terms or as a % of GDP), purely as a result of inflation.

However, even here the serious discussion so far on what taxes or public services might be expanded or contracted has been minimal. Much greater analysis of the options, and their repercussions would be a very valuable exercise prior to any referendum. So too would greater discussion of the debt funding options available and of debt capacity for an independent or fully fiscally autonomous Scotland.

GERS is less useful in predicting, forward to 2010 or beyond, what the fiscal balance including North Sea revenues might be, due to uncertainty over future production levels and over future price levels. To give some idea of this uncertainty – oil production from the North Sea has fallen 40% in under 10 years from its 1999 peak, while in the same period the price has varied from around \$10 a barrel to almost \$140 a barrel. In addition, neither the market nor the government have a very good record in forecasting total expected oil production or future prices. Such uncertainty means that there will always be a degree of risk attached to future revenue levels from oil, although these risks have both an upside and a downside.

Current information on North Sea revenues suggests that the Fiscal Balance, including oil, will decline (i.e. the deficit will become bigger) in 2007-08 over 2006-07, as total North Sea Revenues fell from -£9.1bn to -£7.7bn. Thereafter the balance is likely to increase (i.e. the deficit will become smaller or even turn into a surplus). The HM Treasury projection for North Sea revenues for 2008-09 is £9.9bn based on a price assumption that is much lower than that currently seen. However, we are only one quarter into the financial year 2008-09 and there remains much uncertainty over what the final outcome will be.

FURTHER WORK

The latest edition of GERS highlights that there are still some areas of uncertainty where greater effort by government statisticians and economists is needed in order to confirm the findings and/or explain why they might be as they are. These include:

- further clarification of Scotland's low share of UK income tax revenues
- further work on Scotland's share of North sea revenues based on differing circumstances
- Scotland's share of UK corporation tax revenues
- Scotland's share of VAT revenues

A whole separate issue, for anyone advocating independence or Full Fiscal Autonomy, is clarification over how to run Scottish public finances under these circumstances. In particular, how to most prudently use variable North Sea resources and what level of debt Scotland could, or should, sustain.

With regards to CPPR, as part of our 2010 Project (see http://www.cppr.ac.uk/centres/cppr/project2010/ for details) we will return to the crucial issues outlined in the last section over the months leading up to the intended referendum in 2010.

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