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**Strathclyde**  
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# Fraser of Allander Institute **Economic Commentary**

Vol 32 No.2

In association with

*PRICEWATERHOUSECOOPERS* 

# Fraser of Allander economic commentary

November 2008

Vol 32 No 2

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The Fraser of Allander Institute was established in 1975 as a result of a donation from the Hugh Fraser Foundation. We gratefully acknowledge the contribution of the Buchanan and Ewing Bequest towards the publication costs of the Commentary.

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## Notes to contributors

The editors welcome contributions to the Economic Perspectives section. Material submitted should be of interest to a predominately Scottish readership and written in a style intelligible to a non-specialist audience. Contributions should be submitted to the editor.

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# Outlook and appraisal

## Overview

There is a high probability that the Scottish economy will go into recession in 2009. Recession is the likely outcome of the global financial crisis, which was triggered by the collapse of the house price bubble, initially in the United States, massive foreclosures in the US sub-prime mortgage market, and significant bank and hedge fund losses across the globe as the value of innovative investments based on sub-prime mortgages collapsed. The uncertain solvency of many financial institutions has generated a loss of confidence and trust in the banking system of sufficient scale to produce what one distinguished analyst and commentator has called the “consequent disintegration of the credit mechanism.”<sup>1</sup>

An examination of previous recessions supports the view that cyclical fluctuations of Scottish GDP have less amplitude than in the UK economy. What this means is that the business cycle has tended to be effectively flatter in Scotland and so both upswings and downswings are less severe here than in the UK. We consider that the scale of the downturn confronting us will probably be less severe than the 1980/81 recession, principally because in that recession, monetary and fiscal policy effectively accommodated, even exacerbated, the recession and was not used counter-cyclically to combat it. That will not happen on this occasion as the recent swingeing cuts in interest rates in the UK and the US, and the willingness to borrow more and run up higher levels of public debt, indicate. However, we are less sure that the Scottish economy will weather the coming downturn better than the UK.

The impact of the present crisis will depend on the scale of the deflation of house and property prices in the Scottish market, the extent of the impact on local financial service

activities, and the mechanism governing the spread to the wider Scottish economy.

On the housing and property market effects, we judge that the absolute and relative fall in house prices is likely to be less in Scotland than in the UK. For this reason, and given also that the Scottish home ownership rate at 66%, despite strong growth in the five years to 2006, continues to be lower than in the UK at 70%, we expect that the impact on the Scottish economy of the end of the house price boom will be less than in the UK. We take the view that the impact on banking and financial services will be bigger here than in the UK and that there may be a lingering negative effect in the long-term. This is because the scale of the losses on sub-prime and impairments facing the two principal Scottish banks, RBS and HBOS, are considerable and exceptional compared to other UK banks. The losses have pushed RBS and HBOS to the brink of bankruptcy. This outcome underlines the extent to which the lending behaviour of the two banks had ceased to be underpinned by the traditional risk management practices that had led Scottish banking/bankers to be perceived as prudent and even 'canny'.

The effect on the wider Scottish economy of the financial crisis will be mediated through the following key transmission mechanisms: direct demand; intermediate input demand; domestic household demand; external household demand; credit supply; inward investment; and confidence of businesses and consumers. Because of the heightened levels of uncertainty and the lack of evidence sufficient to give us a clear understanding of the strength and duration of the consequences for each of the transmission mechanisms noted above we publish a central or base forecast and three alternative scenarios.

Our central forecast reveals that from 2007 there will be five years of below trend growth and a fall in output, or recession in 2009. Scottish GDP growth will slow from 1.9% in 2007 to 0.7% in 2008. In 2009, we project

that GDP will fall by 1.1%, but recession will only be evident in that year as growth picks up again to 0.7% in 2010, 1.2% in 2011 and 1.5% in 2012. For the first time in quite a few years Scotland experiences net job losses, with over 4,000 lost in 2008, more than 37,000 lost in 2009, and around 12,000 lost in 2010. In 2011, net jobs begin to be created again quite quickly with more than 14,000 net jobs, rising to net job creation of below 24,000 in 2012. The scale of the initial job losses is sufficient to push up unemployment from the historically low levels that the Scottish economy has enjoyed over the past few years. Unemployment on the ILO measure increases from 117,300, or 4.4%, peaks at 162,300, or 6.1% in 2010 then falls to 151,000, or 5.7%, in 2011, falling further to 137,300, or 5.2%, in 2012.

On our optimistic scenario, financial and housing market impacts are less severe, lending behaviour picks up more quickly, confidence is re-established sooner, and monetary policy is a little more aggressive. Here GDP growth slows down in 2008 but by less than in the base case falling to 0.8%. Similarly, in 2009 the scale of the fall in GDP is slightly less at -1% rather than -1.1%. In 2010, 2011 and 2012 there is a stronger recovery as growth rise to 1%, 1.6% and 1.8% respectively, returning almost to trend by 2012. Job losses are also less in this case and the recovery in the labour market stronger. This has a more favourable impact on unemployment than in the base case.

In the recession plus slow recovery case there is both a stronger downturn and slower recovery than in the central or base case. In this scenario, lowered confidence, depression in the housing market, contraction in the construction and financial service sectors are more severe than in the base case. Lending behaviour does not improve significantly from present levels, and monetary policy remains cautious after the recent rate cuts. GDP falls by -1.2% in 2009 there are considerable job losses of over 46,000 and the ILO unemployment rate increases to 6.3%. Growth hardly recovers in

2010 as GDP expands by only 0.6%, nearly 16,000 net jobs are lost and the unemployment rate increases further to 6.4%. In 2011 and 2012 there is GDP growth of 1% and 1.2%, which are well below trend. Net jobs begin to be created in these final two years by 9,000 and 17,000 respectively and the unemployment rate recovers somewhat to 6.1% and 5.5%.

Our final case is, a worst-case scenario of sustained recession. Here, the seizure of the financial system continues for an extended period, bank illiquidity persists, lending continues to be severely constrained, and business confidence remains low. A greater contraction in household and investment demand follows, leading to negative growth for two consecutive years of -1.6% in 2009 and -0.4% in 2010. Growth turns weakly positive at 0.3% in 2011 and continues no better than the 2008 expected growth rate of 0.7% in 2012. Under this scenario net job losses are considerable as the downturn is sufficient to produce a shakeout of hoarded labour. Net employment falls by 73,000 in 2009, and by 44,000 in 2010, with some improvement thereafter. ILO unemployment deteriorates to 6.5% in 2009, peaking at 7.1% or 187,000 in 2010. In 2011 and 2012 there is some improvement as the rate falls to 6.2% and 5.8%.

### **GDP Performance in first quarter 2008**

The latest official outturn data for the Scottish economy refer to the second quarter 2008. Total Scottish gross value added at real basic prices rose by 0.1% in the quarter and by 1.8% over the year. The comparable UK figures were 0.0% and 2.5%. So, Scotland's exhibited a marginally stronger growth performance than the UK during the quarter, but essentially the UK economy was stagnating in the second quarter and Scotland's performance was little different, as Figure 1 indicates.

Service sector growth was weaker in Scotland during the quarter with an outturn of 0.1% here compared to 0.2% in the UK – see Figure 2. Over the year, Scottish and UK services grew at broadly the same rate of 3% and 3.1% respectively.

Within Scottish services the sector performing the most strongly in the second quarter was transport &

communication with growth of 2.6% compared to 1% in the UK. Retail & wholesale grew by 1.7% as against 0.7% in the UK and other services grew by 1% compared to zero growth in the UK. The remaining four aggregated service sectors for which data are published all cut back production in the quarter. Hotels & catering, financial services and real estate & business services all contracted by 1%, compared to mixed performance in their UK counterparts of -1.9%, 0% and +0.2%. The public sector contracted slightly, by 0.1% in Scotland, compared to an increase of 0.1% in the UK. Over the year, other services grew most quickly at 7.6% (3% in the UK), followed by transport & communication 6.7% (1.9% in the UK), retail & wholesale 4.8% (2.9% in UK) and hotels and catering 0.5% (0.7% in the UK). Financial services was the weakest sector over the year, contracting by 4.8% compared to a 7.7% rise in the UK.

Manufacturing in Scotland grew by 0.7% in the second quarter, in contrast to UK manufacturing, which cut back output by 0.9% - see Figure 3. While over the year, GVA in Scottish manufacturing rose by 0.7% compared to a rise of 0.2% in the UK.

Within manufacturing, the relatively stronger Scottish performance in the second quarter was driven by engineering, chemicals, and other manufacturing. In engineering, transport equipment grew by 3.9% (-4.4% over the year), mechanical engineering by 1.5% (5.3% over the year) and electronics by 0.8% (1.2% over the year). The comparable UK figures were, 1% (-0.7%) over the year, -0.8% (3.6% over the year), and -2% (-0.6% over the year), respectively. Chemicals & man-made fibres exhibited growth of 1.4% in Scotland in the second quarter, while contracting by 0.4% in the UK. Other manufacturing in Scotland grew by 0.9%, while its UK counterpart reduced output by 1.4%. At the other extreme the weakest manufacturing sectors in Scotland during the quarter were, paper, printing & publishing which contracted by 2.7% and by 3.2% over the year (-0.2% and 0.6% in the UK, and food & drink, which cut back output by 1.5% in the quarter but raised output by 3.2% over the year (-2.1% and -1.3% in the UK).

Figure 4 brings together the GVA indexes for 10 key sectors that are, or have been, significant for the growth of the Scottish economy. The figure reveals the continuing strength in transport & communication services, the weakness in financial services since the 2007q1, the upturn in activity in retail & wholesale, and the turndown in hotels & catering, real estate & business services, and food & drink from 2008q1.

### **Looking into the abyss**

It is now nearly 5 months since we last reported on the Scottish economy. Along with most analysts and forecasters we failed to anticipate the scale of the subsequent change and deterioration in the world economy generally and the financial markets specifically. We saw that the US economy

was teetering on the brink of recession and that with high and rising oil and commodity prices both the US and the developed economies faced the spectre of stagflation. We also saw the oil price rising further from the then \$139 price peaking at close to \$200 possibly within twelve months and then falling to a more sustainable level of \$80 to \$90 per barrel. But we were not sure of the timescale over which such a movement would occur. In the event the oil price peaked at \$147 and has since fallen back to below, and now around, \$70.

Hence, in the short term, inflation is now much less of a problem, while the threat to demand and real output in both the US and the major economies, including the UK and Scotland, is much greater than we anticipated. On the key factors influencing the prospects for the real economy it is worth repeating what we said last time:

“It is now well understood that the trigger events in the US slowdown stemmed principally from the housing market: ending of the house price boom; house price falls and higher interest rates; massive foreclosures in the sub-prime mortgage market; significant bank and hedge fund losses as the value of innovative investments based on sub-prime mortgages collapsed; and the subsequent drying up of liquidity in financial markets, or ‘credit crunch’ as it is now popularly known. The loss of trust occasioned by the sub-prime crisis has thrown a huge spoke in the wheel of the global financial system. Moreover, the credit crunch is exceptionally serious because ..... the problem with the markets isn’t just a lack of liquidity, as in many previous financial crises, there’s also a fundamental problem of solvency that is still not fully identified. Scotland cannot be insulated from wider forces. What is still uncertain is the extent of the sub-prime losses in the global banking system and because of that the degree to which the financial system is pulling back from traditional lending activities. If that pull back is marked then there is little doubt that growth will slow considerably.”

What we did not appreciate was that the collapse of the asset price bubble, which was what happened to the housing markets in the US and UK, would lead to insolvency in so many key financial institutions, the effective disintegration of the credit supply mechanism in the global economy, and a major pull back from traditional lending activities both between the banks and to the wider economy.

There is now almost universal agreement – a possibly dubious phenomenon – that the ‘collapse’ of the housing market, the scale of the losses experienced by banks and other financial service sector firms, and the breakdown of credit supply are producing a slowdown in the ‘real’ economy of considerable severity. The likely size of such a slowdown for any economy is exceptionally difficult to call because it depends on the scale of the deflation of house and property prices in the domestic market, the scale of the

impact on local financial service activities, and the spread to the wider domestic economy.

Against the background of unprecedented upheaval in the financial sector, financial markets and the global economy generally, recent economic performance data on GVA and employment offer little or no guide to future outcomes. Forecasting becomes even more difficult at such times. However, we are not completely in the dark. There are some guidelines on which we can draw.

First, to derive some sense of the prospects for the Scottish economy it is worth looking at what a recession has meant in UK and Scottish terms. This should provide a benchmark and perhaps framework against which the expected downturn can be set. We then turn to the property market impacts, the effect on financial services in Scotland, and finally, wider economy considerations.

### *Lessons from previous recessions*

It has now become something of a stylised fact that cyclical fluctuations of Scottish GDP have less amplitude than in the UK economy. What this means is that the cycle is considered to be effectively flatter and so both upswings and downswings are less severe here.

Figure 5 indicates that since 1963 there have been 3 severe recessions in the UK, defined here as a downturn sufficient to make annual growth negative for at least one year, in 1974/75, 1980/81 and 1991. In the UK, there was a technical recession of two quarters in 1961 but it lasted no more than that. In 1974/75, there were 3 quarters with successive negative growth running from the third quarter 1973, followed by negative growth in the fourth quarter of 1974, then negative growth again in the second and third quarters of 1975. In 1980/81, the recession in the UK was altogether more severe both in terms of the scale of output contraction and its duration. Output fell by 2.8% and 1.4% respectively in 1980 and 1981 and growth was negative for 5 successive quarters from the first quarter of 1980. However, it is worth noting that there was negative growth in the first and third quarters of 1979 too. Finally, in 1991 growth turned negative in the third quarter of 1990 and negative growth continued for four further quarters, with GVA dropping by 1.5% in 1991 overall.

So, severe recessions in the UK would appear to be associated with an annual fall in output of between 1.5% and 3% and a duration of negative growth lasting for 5 to 7 quarters, although not necessarily consecutive quarters.

The data in Figure 5 confirm the view that recessions have tended to be less severe in Scotland compared to the UK and in 1991 Scotland did not experience a recession. The reasons for this are complex reflecting the different structure of the Scottish economy, the behaviour of key actors in the economy and the source of the recession. Other things equal, a somewhat bigger public sector in Scotland and



fairly high levels of income compensating social security payments have helped the economy weather downturns in private sector market demand for goods and services. In addition, the higher Scottish household propensity to save has tended to relatively protect Scottish household expenditure from interest rate hikes as it did in 1991. Moreover, the lower degree of home ownership, lesser willingness to take on debt also helped Scotland to avoid recession in that year.

So what help does this analysis provide in helping to forecast the scale of the expected downturn in both Scotland and the UK?

We think it unlikely that the recession in prospect will be as severe as 1980/81, although we cannot say this with certainty. In that recession, monetary and fiscal policy effectively accommodated, even exacerbated, the recession and was not used counter-cyclically to combat it. That will not happen on this occasion as the recent swingeing cuts in interest rates in the UK and the US, and the willingness to borrow more and run up higher levels of public debt, indicate. Yet, we are unsure about the scale of the exogenous demand shock that will hit the economy. A key source of the expected downturn is global rather than local in nature. This is somewhat different from previous recessions and could make the outcome more severe than a recession due to a fall in domestic demand.

#### *Will Scotland suffer by more or less than the UK?*

The evidence is clear that recessions have tended to be weaker here for some of the reasons noted. But on this occasion we are less sure. We suggested above that the impact of the present crisis depends on the scale of the deflation of house and property prices in the domestic market, the scale of the impact on local financial service activities, and the spread to the wider domestic economy. On each of these the effect is likely to differ between Scotland and the UK. We look at each in turn.

#### *Housing and property market*

The root of the credit crunch lies in the bursting of the asset bubble in housing and property markets in the US, UK and now in several other countries. The ending of the house and property price boom would be expected to affect activity in house building and construction and with declining net asset values promote a slowdown in household spending. As Figure 6 indicates, the construction sector has been weak in Scotland for some time, with GVA falling from the 2006q3. The same has not applied to UK construction, which peaked in the first quarter of this year followed by a fall in GVA of 0.5% in the 2008q2 compared to a fall of 0.4% in Scotland. Data from the latest Scottish Chambers' Business Survey (SCBS) suggest that the sector continued to contract in the third quarter of this year with a large proportion of firms expecting lower sales, jobs and profits over the next twelve months. The percentage of firms reporting declining business confidence was the highest since the survey began.

An examination of data on house prices should offer some indication of the likely comparative UK and Scottish impact of the ending of the house price boom. Figures 7 and 8 chart the change in house prices since 1983. Figure 7 reveals that UK house prices more than tripled from the previous trough in house prices in 1993 to the latest peak in 2007 whereas Scottish house prices rose by just under 2.5 times the 1993 figure. From Figure 8, it is clear that house prices are likely to have fallen by proportionally less in Scotland (-3.4%) than in the UK (-8.3%). The figure also shows that changes in Scottish house prices lag changes in the UK and that the degree of change in house prices here tends to be less. We judge from this that both the absolute and relative fall in house prices is likely to be less in Scotland than in the UK. For this reason, and given also that the Scottish home ownership rate at 66%, despite strong growth in the five years to 2006, continues to be lower than in the UK at 70%, we expect that the impact on the Scottish economy of the end of the house price boom will be less than in the UK.

#### *Financial services and banking*

We noted in the June 2008 Commentary that financial services (8% of economy GVA), for a long time a key driver of the Scottish economy, began to stutter in the post 2005Q1 period with quarterly growth averaging 0.98% compared to 2.03% in the earlier period. The weakening performance of financial services was much influenced by the downturn in the second and third quarters of 2007 with GVA falling by 3.4% and 1.8% respectively – see Figure 9. What remained unclear was how much this weaker performance was related to the “credit crunch” and/or whether other factors contributed. In the final quarter of last year the sector grew appreciably by 3.8%. However, in the first quarter of 2008 the measured GVA of financial services fell dramatically by 9.1% and this was followed by a further fall of 1.0% in the second quarter. On the face of it this suggests that the ‘credit crunch’ was having a significant impact on Scottish financial services in the first half of the year. It is worth entering a note of caution here, though, because UK financial services grew by 2.7% in the first quarter of the year and was essentially stagnant exhibiting zero growth in the second quarter. To muddy the waters further, the Scottish Government's GVA data on banking reveals that the sector grew by 3.6% in the second quarter, with the brunt of the contraction in financial services being born by the insurance sector, after contracting by more than 11% in the first quarter.

We conclude that the impact of the ‘credit crunch’ has been evident in the financial services sector data for Scotland and the effect will become even more clear in the next few quarters. But will the impact on financial services be bigger here than in the UK as a whole?

We take the view that the impact will be bigger here and that there may be a lingering negative effect in the long-term. This is because the scale of the losses on sub-prime and impairments facing the two principal Scottish banks, RBS

and HBOS, are considerable and exceptional compared to other UK banks. The losses have pushed RBS and HBOS to the brink of bankruptcy. This outcome underlined the extent to which the lending behaviour of the two banks had ceased to be underpinned by the traditional risk management practices that had led Scottish banking/bankers to be perceived as prudent and even 'canny'.

There is much evidence for this. The new CEO of RBS Stephen Hester, in interviews following his appointment, made it clear that the bank had lent far too much in good times and had fostered a 'bull market culture'. The position at HBOS was even worse with the company seeking to become the 'Tesco of UK banking'<sup>ii</sup> with an emphasis on sales growth and cost efficiency. The company firmly believed that such a strategy was not at the cost of additional risk, with Phil Hodkinson Group Finance Director, stressing that "(t)he combined ratio of cost and impairments to income has ... fallen over time at HBOS ... despite a period of worsening impairments in the UK unsecured market."<sup>iii</sup> With hindsight that statement must be viewed as over optimistic at the very least. Added to this it would appear that HBOS corporate lending was over focused on property and house building companies. So, it is being hit by a triple whammy of losses on collateral debt obligations (CDOs), based on sub-prime, and rising impairments on both the demand and supply sides of the housing and property markets.

There will be a short to medium term impact of all of this on Scottish banking. Output and jobs will be cut back. The government sponsored takeover of HBOS by Lloyds/TSB is likely to lead to a rationalisation of the two banks high street, back office and HQ operations. But it would be a mistake to believe that the prospective job losses are the consequence of the takeover. Rather they are the consequence of the policies of HBOS management. In the absence of the Lloyds/TSB takeover it is almost certain that HBOS would have become insolvent and would have had to be directly nationalised. Job losses and output contraction would have been the inevitable outcome as the UK government sought to make it an attractive proposition for an eventual buyer. And it might be argued that since Lloyds/TSB has significant retail banking overlap with HBOS in Scotland, the potential for rationalisation and cost reductions is high and so Lloyds/TSB may be able to offer a higher bid price than other likely bidders

Further to these direct effects, the two Scottish banks are also going to be affected by the rising impairments consequent upon a slow down in the wider economy and HBOS would appear to be especially exposed to this as we note above due its lending focus on property and house building businesses. Finally, the banks current unwillingness to lend plus a reduction in the demand for loans as the economy slows will also help to reduce banks' income. The scale of this will depend on the extent of the slowdown in the wider economy, to which we turn in the next section.

One further point. We should not underestimate the damage in the longer term this episode has done, and may yet do, to Scotland's reputation for banking excellence. It seems unlikely that RBS will adopt such an aggressive lending and growth policy in the future but it might also find it harder to win new business when the upturn in the economy eventually occurs unless and until confidence in its management is fully restored. For an independent HBOS, the same problem would apply, and might be worse. But absorbed into Lloyds/TSB, which has managed to maintain its banking reputation, such problems will be much less.

### *The wider economy*

The main mechanisms through which the present crisis is spreading outside the property and financial markets are through falls in:

- intermediate demand impacts on suppliers to financial service companies, property developers, house builders and construction companies;
- domestic household demand due to the impact of asset price deflation – e.g. houses and shares – on spending plans, plus the secondary multiplier effects of reduced spending by workers and shareholders in financial service and property related companies;
- external household demand for Scottish goods and services – including tourism – as the crisis spreads throughout the world economy lowering trade flows;
- credit supply from banks to investing firms and households, as banks seek to rebuild their balance sheets via loan restriction and higher charges;
- inward investment from non-Scottish companies abroad due to own product demand contraction and credit supply restriction;
- confidence of business managers and households, a lowering in confidence is likely to reduce investment and spending plans independently of the direct and secondary demand and price effects of the property and financial crisis.

We saw in Figure 4 that and the GVA in real estate & business services, hotels & catering, and food & drink had turned down during the second quarter of this year. Activity in real estate has been clearly affected by the slowdown in the property market. The slowdown in hotels and catering, and food and drink may reflect the effect of the crisis on export sales, with the demand for luxury products such as foreign holidays and whisky tending to be cut back early as the growth of household incomes worldwide slows. The manufacturing export figures for the second quarter support this view with foreign exports of food, drink and tobacco falling in real terms by 2.5%. It might also be expected that Scotland's production of upmarket textiles products, and

clothing would also be hit. Again the export figures for the second quarter appear to confirm this with a real fall in sales of 6.6%, but this did not affect the production data with GVA in the sector rising by 1.8% in the quarter. Overall, the level of Scottish manufactured exports was unchanged in 2008q2 suggesting that the expected slowdown in world incomes and trade had only just begun to lap at our shores.

The impact on domestic household incomes and demand of the crisis would be expected to effect retailing activity fairly quickly in the downturn. And this appears to have been occurring during the second quarter. For while retail & wholesale experienced an upturn in GVA (+1.7%) during the quarter, at the level of the retail sector alone GVA fell (-1.8%), all be it against a background of an increase of over 4% over the year to the second quarter.

We have no official outturn data on production after the second quarter. However, survey data are available for the third quarter and these are reviewed in the Commentary below: A Review of Scottish Business Surveys. These surveys broadly confirm the fear that domestic demand, production and labour market performance and business confidence are deteriorating appreciably. While our Review warns that survey results such as these can easily lend themselves to an over pessimistic interpretation, and so must be treated with caution, there is strong evidence of a general slowdown in activity and rising spare capacity with inflationary pressures beginning to ease.

## Forecasts

Forecasting is hedged around with considerable uncertainty at the best of times. The best times for forecasting are when the economy is exhibiting steady growth, sustained over long periods. The worst time, is probably a situation like the present where there is clear evidence of a shock to the system but insufficient evidence to gain a deep understanding of the strength and duration of the consequences for each of the transmission mechanisms noted above: direct demand; intermediate input demand; domestic household demand; external household demand; credit supply; inward investment; and confidence of businesses and consumers. Because of these heightened levels of uncertainty we are publishing a range of forecasts based on different scenarios. These are:

- a central or base case;
- an optimistic case;
- a recession and slow recovery case;
- a sustained recession case

We deal with our central forecast first and then summarise the alternative scenarios, with further detail provided in the Scottish Forecasts section of this Commentary.

## Central forecast

This is our central case and in our judgement has the highest - but unspecified -probability of occurring. In this case the growth of the principal components of aggregate demand slows down significantly in 2009 but begin to pick up again in 2010 returning to pre-crisis levels in 2011 or 2012. Falling asset prices, lowered confidence, the depression in the housing market, and contraction in the construction and financial service sectors lead to the growth of consumer/household demand falling by 0.6% next year. Lower business confidence, rapidly slowing aggregate demand and credit supply restrictions lead to investment demand becoming slightly negative in 2008 (-1.8%), and significantly negative in 2009 (-6%). Export growth slows but remains positive as weaker sterling offsets to a limited extent the slowdown in the growth of world demand and trade.

In these circumstances, we are forecasting - see Figure 10 - that Scottish GDP growth will slow from 1.9% in 2007 to 0.7% in 2008. Next year, 2009, we project that GDP will fall by -1.1%, but recession will only be evident in that year as growth picks up again to 0.7% in 2010, 1.2% in 2011 and 1.5% in 2012. So this forecast suggests that we shall have from 2007, five years of below trend growth and a fall in output, or recession in 2009.

Such a slowdown in GDP has implications for the labour market. For the first time in quite a few years Scotland experiences net job losses, with over 4,000 lost in 2008, more than 37,000 lost in 2009, and below 12,000 in 2010. In 2011, net jobs begin to be created again quite quickly with more than 14, 000 net jobs, rising to net job creation of below 24,000 in 2012 – see Figure11.

The scale of the job losses is sufficient to push up unemployment from the historically low levels that the Scottish economy has enjoyed over the past few years – see Figure 12. Unemployment on the ILO measure rises from 117,300, or 4.4%, in 2008 to 152,300, 5.7% in 2009, and peaks at 162,300, or 6.1% in 2010. The effect of the slowdown in GDP and jobs growth has a lagged effect on unemployment. By 2011, the unemployment rate has begun to fall to 151,000, or 5.7%, falling further to 137,300, or 5.2% in 2012.

## Alternative scenarios

Figures 10, 11 and 12 graph the expected outturn for GDP growth, net jobs change and the ILO unemployment rate over the forecast horizon under our alternative scenarios.

On our optimistic scenario financial and housing market impacts are less severe, lending behaviour picks up more quickly, confidence is re-established sooner, and monetary policy is a little more aggressive. Here GDP growth slows down in 2008 but by less than in the central case falling to 0.8%. Similarly, in 2009 the scale of the fall in GDP is slightly less at -1% rather than -1.1%. In 2010, 2011 and 2012 there is a stronger recovery as growth rise to 1%,

1.6% and 1.8% respectively, returning almost to trend by 2012. Job losses are also less in this case and the recovery in the labour market stronger, with net job change of -32,470 in 2009, -4,992 in 2010, 23,669 in 2011 and 29,876 in 2012. This has a more favourable impact on unemployment than in the central case.

In the recession plus slow recovery case there is both a stronger downturn and slower recovery than in the central or base case. In this scenario, lowered confidence, depression in the housing market, contraction in the construction and financial service sectors are more severe than in the central case. Lending behaviour does not improve significantly from present levels, and monetary policy remains cautious after the recent rate cuts. GDP falls by -1.2% in 2009 there are considerable job losses of over 46,000 and the ILO unemployment rate increases to 6.3%. Growth hardly recovers in 2010 as GDP expands by only 0.6%, nearly 16,000 net jobs are lost and the unemployment rate increases further to 6.4%. However, by 2011 and 2012 GDP growth increases further to 1% and 1.2% but remains well below trend. Net jobs begin to be created in the final two years by 9,000 and 17,000 respectively and the unemployment rate recovers somewhat to 6.1% and 5.5%.

Our final case is, in our view, a worst-case scenario of sustained recession. Here, the seizure of the financial system continues for an extended period, bank illiquidity persists, lending continues to be severely constrained, and business confidence remains low. This leads to a greater contraction in household and investment demand, with negative growth for two consecutive years of -1.6% in 2009 and -0.4% in 2010. Growth turns weakly positive at 0.3% in 2011 and continues no better than this year's expected growth rate of 0.7% in 2012. Under this scenario net job losses are considerable as the downturn is sufficient to produce a shakeout of hoarded labour. Net employment falls by 73,000 in 2009, and by 44,000 in 2010. Weak net job creation occurs in 2011 of just over 2,000 jobs and 8,000 jobs in 2012. ILO unemployment deteriorates to 6.5% in 2009, peaking at 7.1% or 187,000 in 2010. In 2011 and 2012 there is some improvement as the rate falls to 6.2% and 5.8% but these rates remain well above present levels.

Brian Ashcroft  
10 November 2008

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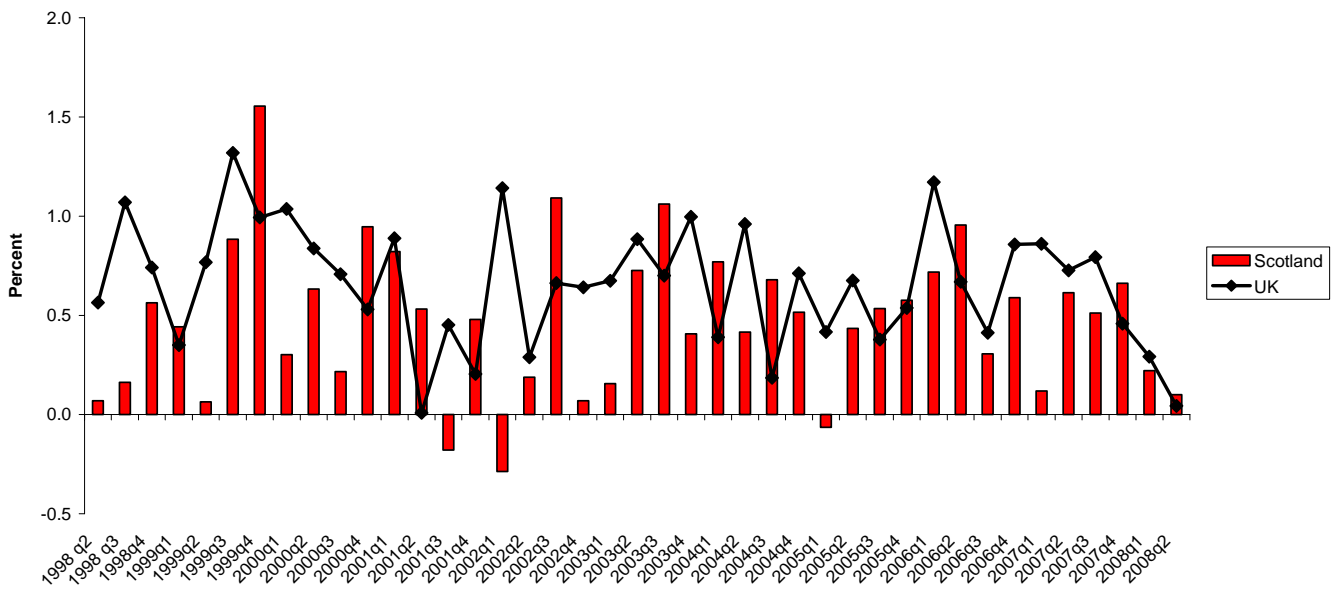
### Endnotes:

<sup>i</sup>Martin Wolf, Financial Times, 31 October 2008.

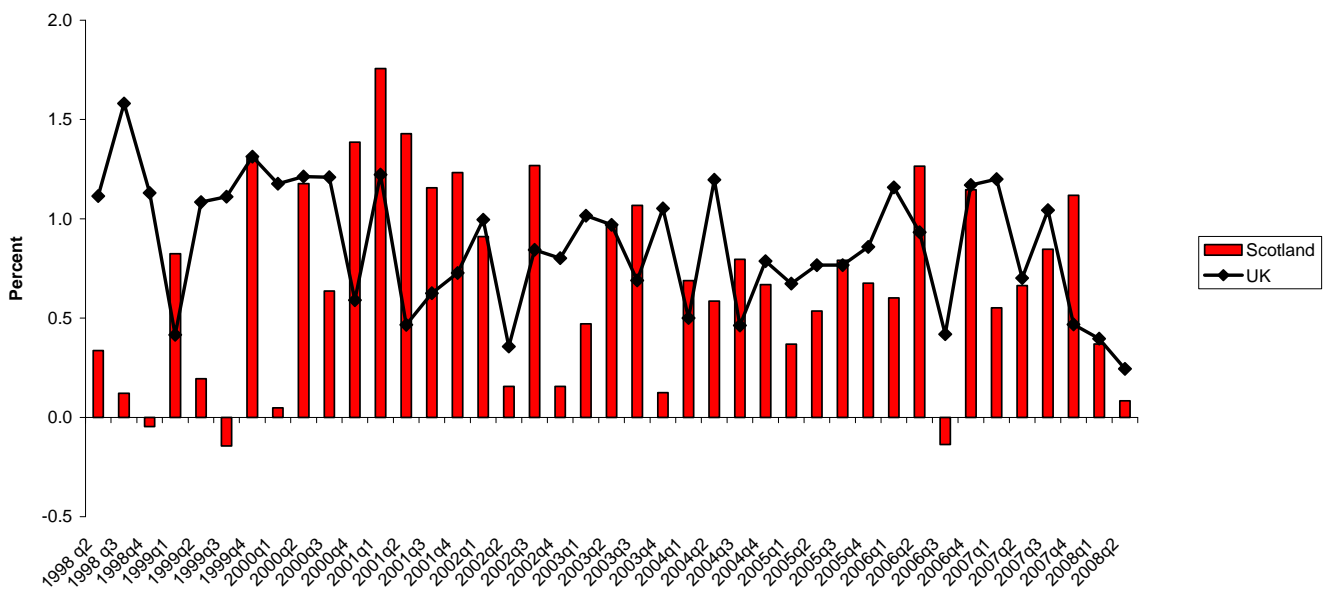
<sup>ii</sup>From speech by HBOS Group Finance Director, Phil Hodkinson, Goldman Sachs Conference, 15 June 2007.

<sup>iii</sup>ibid

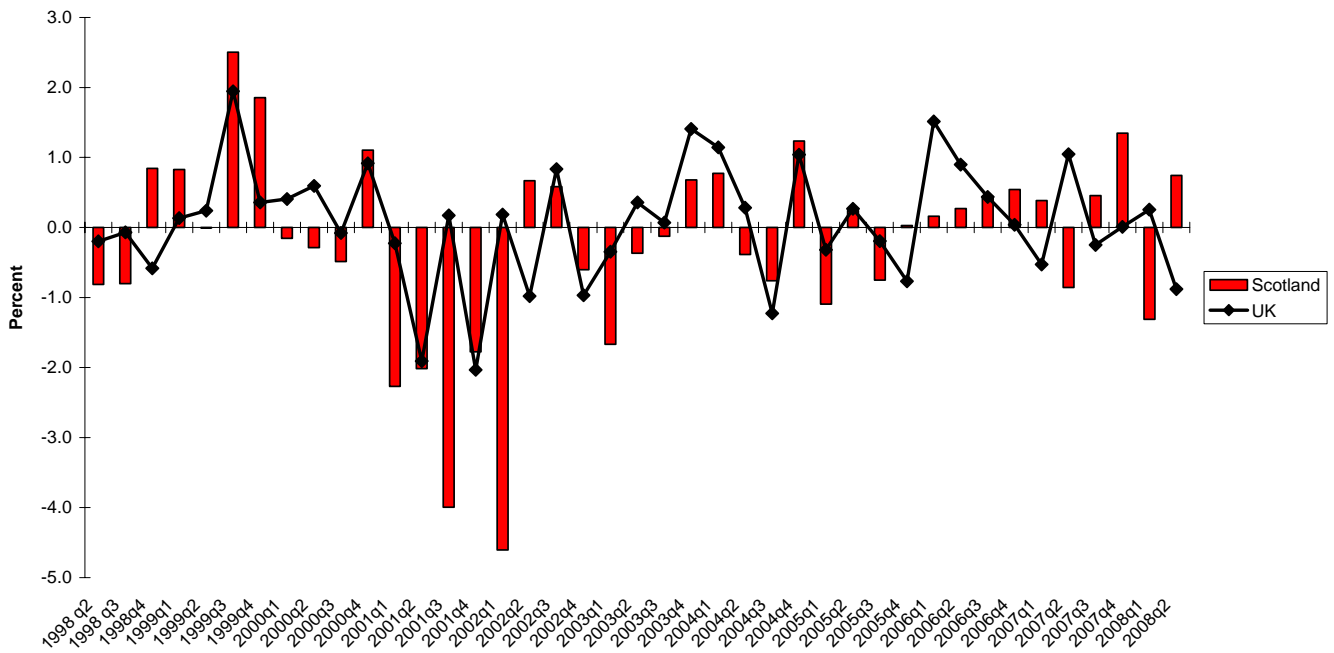
**Figure 1: Scottish and UK Quarterly GDP Growth, 1998q2 to 2008q2**



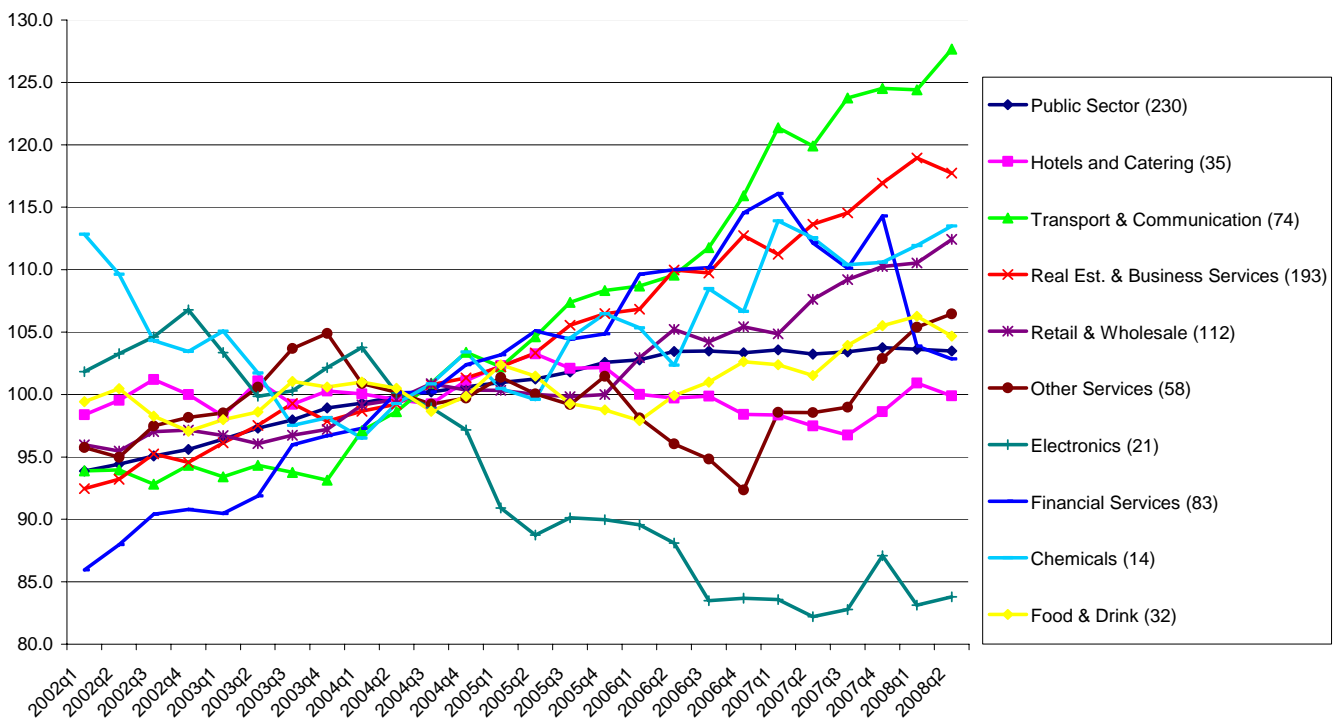
**Figure 2: Scottish and UK Services Quarterly GVA Growth at constant basic prices 1998q2 to 2008q2**



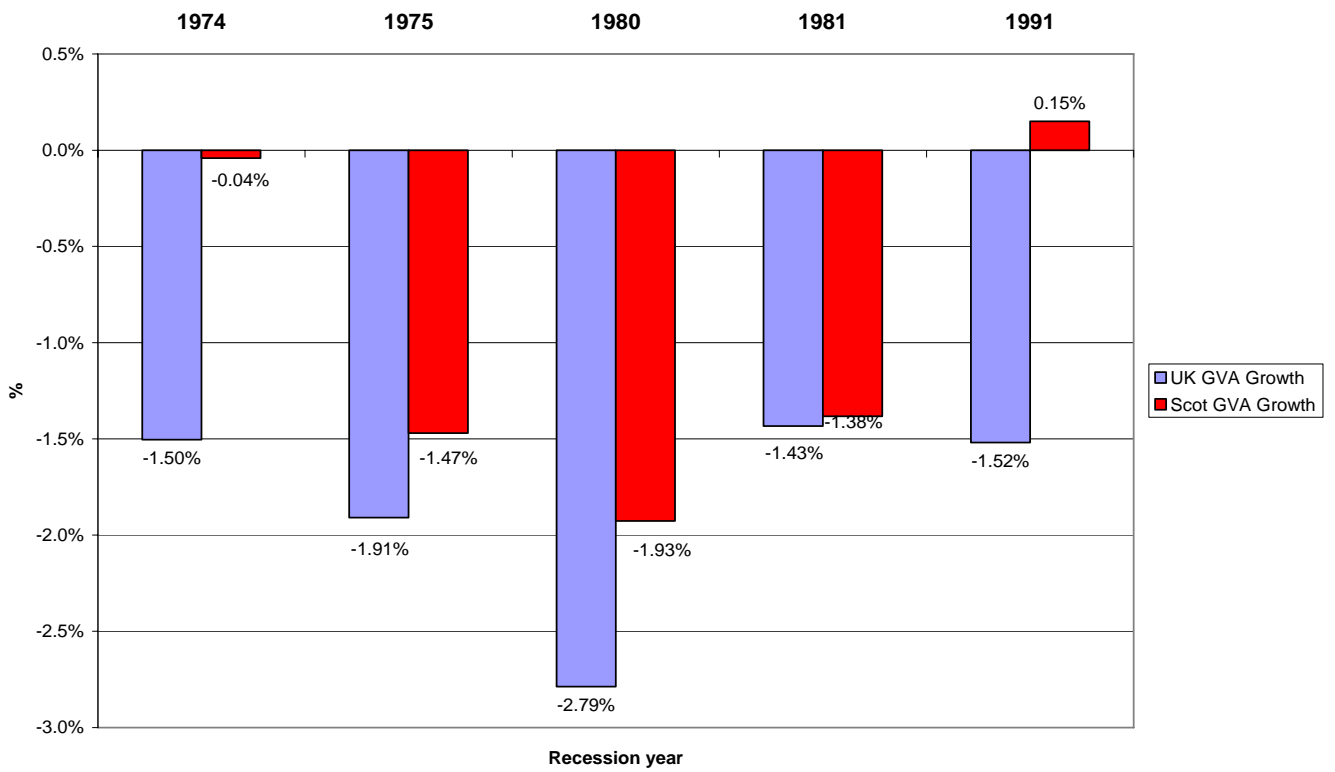
**Figure 3: Scottish and UK Manufacturing Quarterly GVA Growth at constant basic prices 1998q2 to 2008q2**



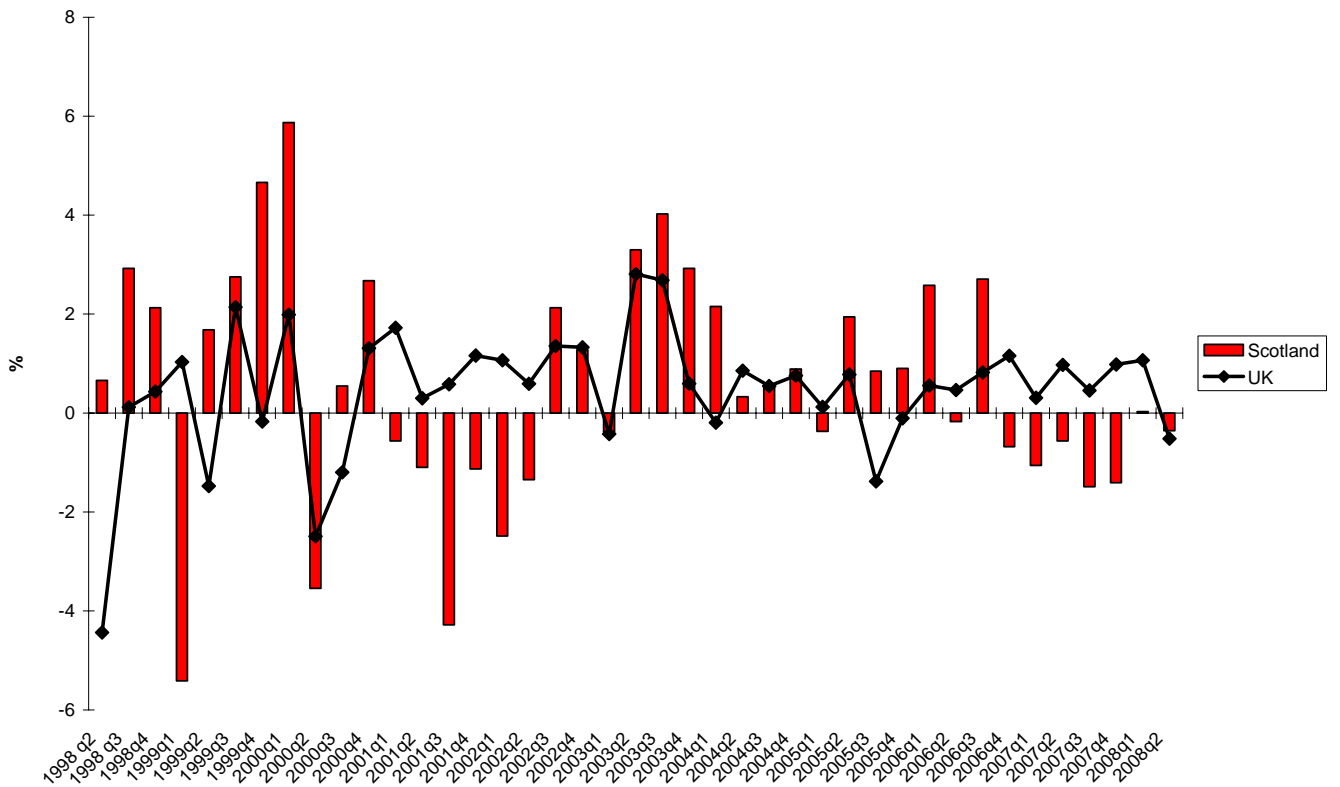
**Figure 4: Growth of key sectors in Scotland 2002q1 to 2008q2**



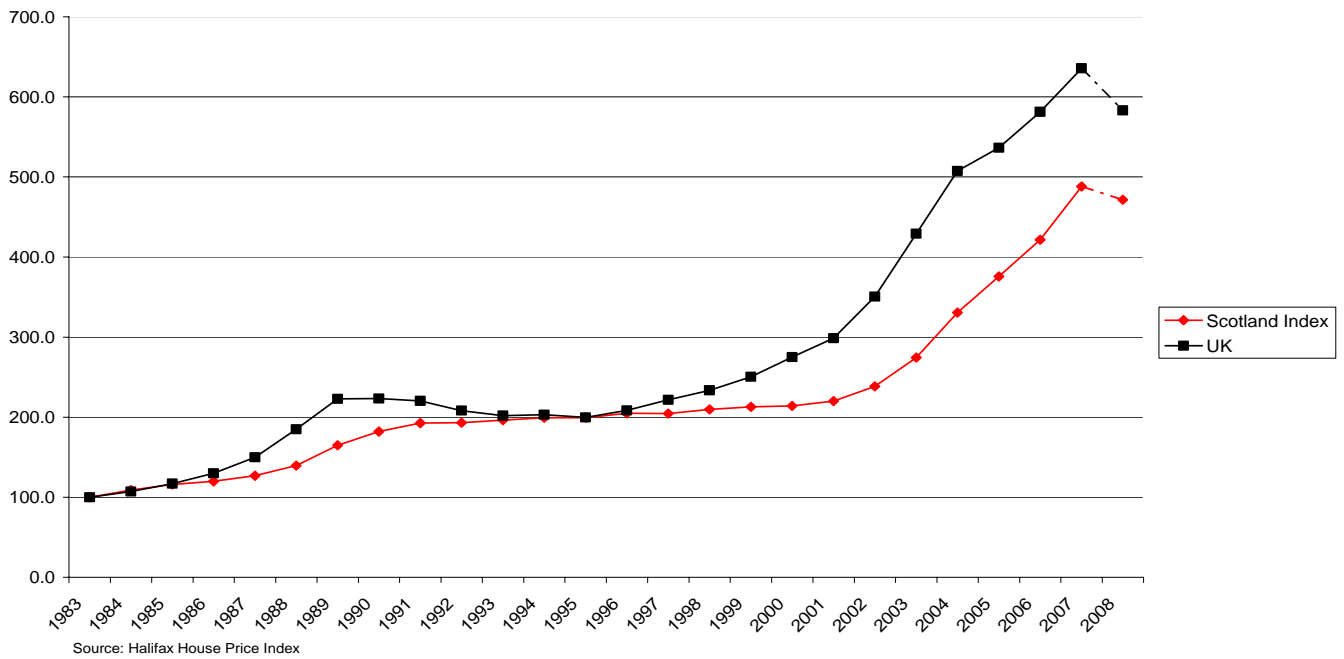
**Figure 5: GVA Growth Recessions in the UK and Scotland 1963 to 2007**



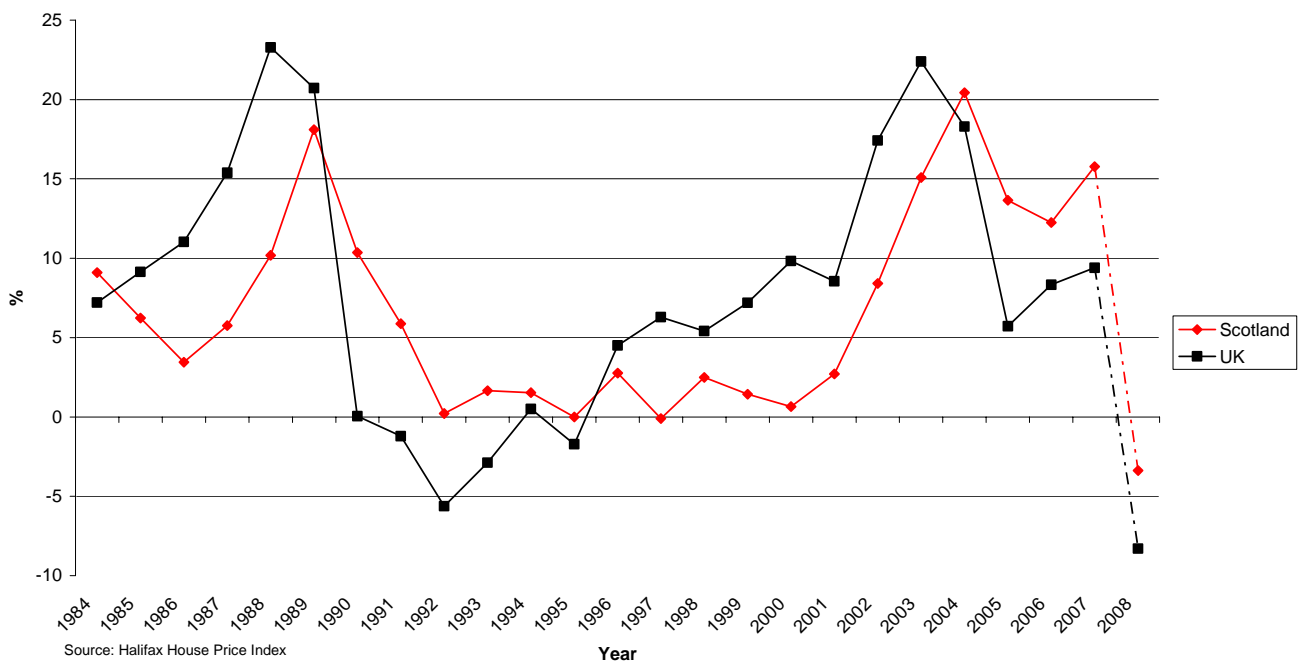
**Figure 6: Scottish and UK Construction GVA Volume Growth 1998q2 - 2008q2**



**Figure 7: Annual Average House Prices in Scotland and UK, 1983 to 2008, 1983 = 100**

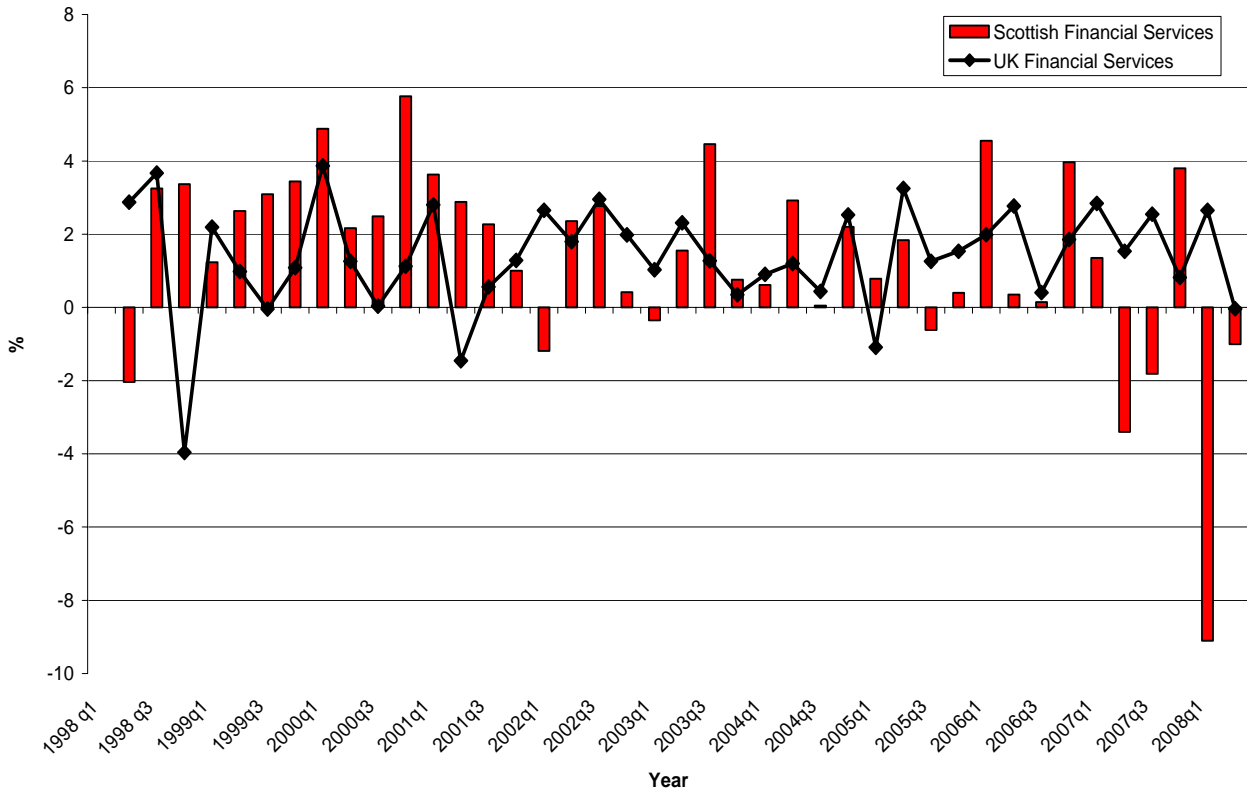


**Figure 8: Change in Average House Prices in Scotland and UK, 1983 to 2008, 1983 = 100**

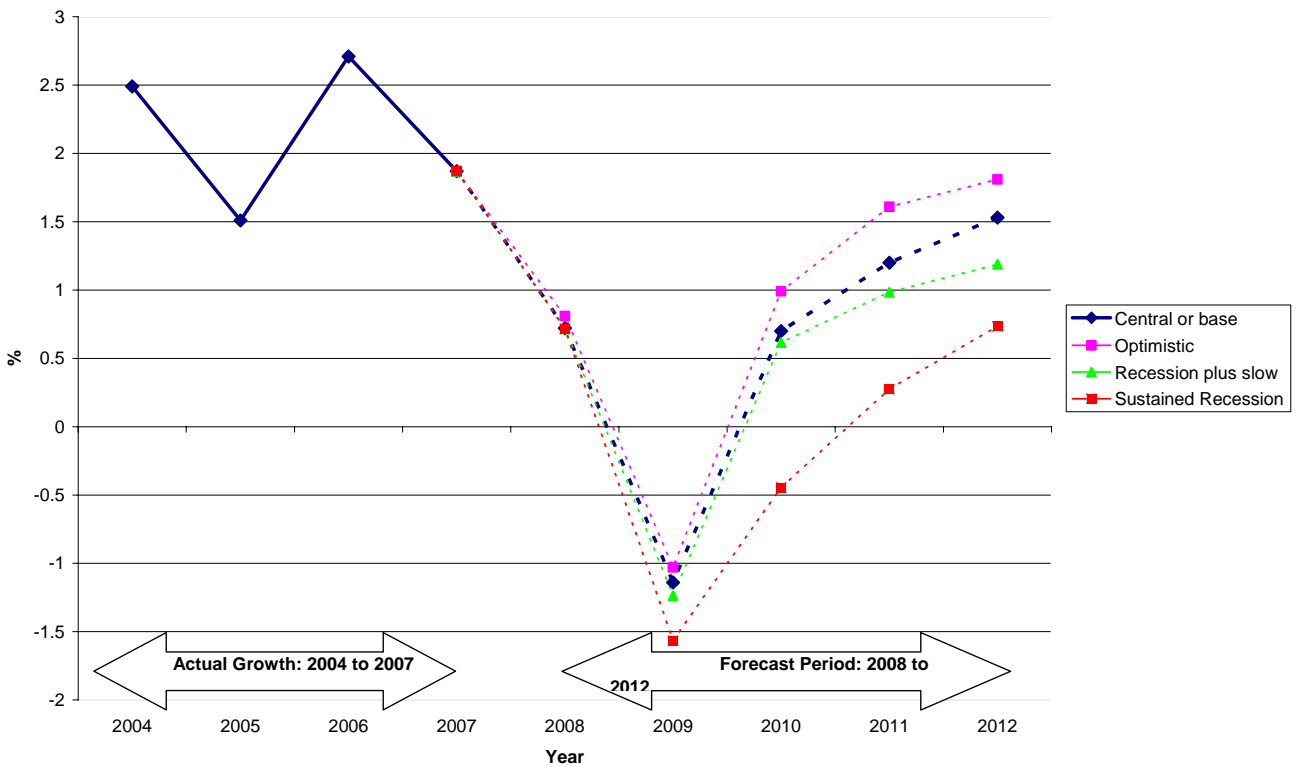




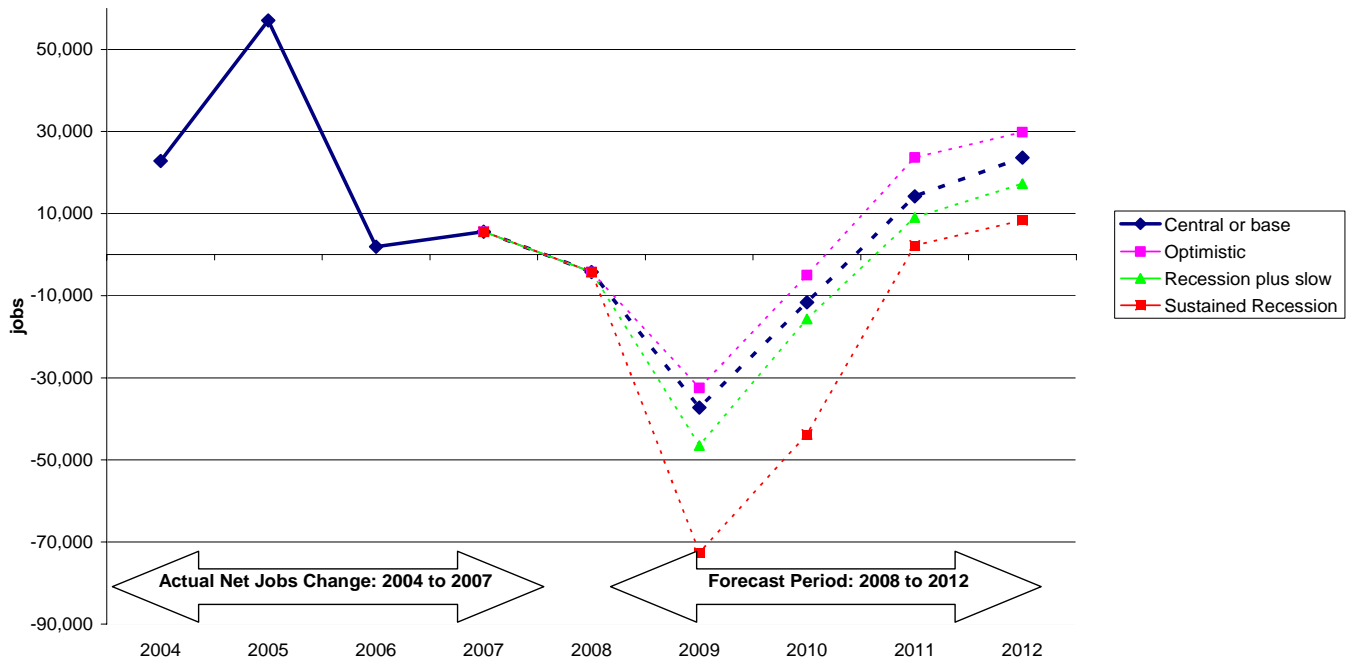
**Figure 9: Scottish and UK Financial Services GVA Growth at constant basic prices 1998q2 to 2008q2**



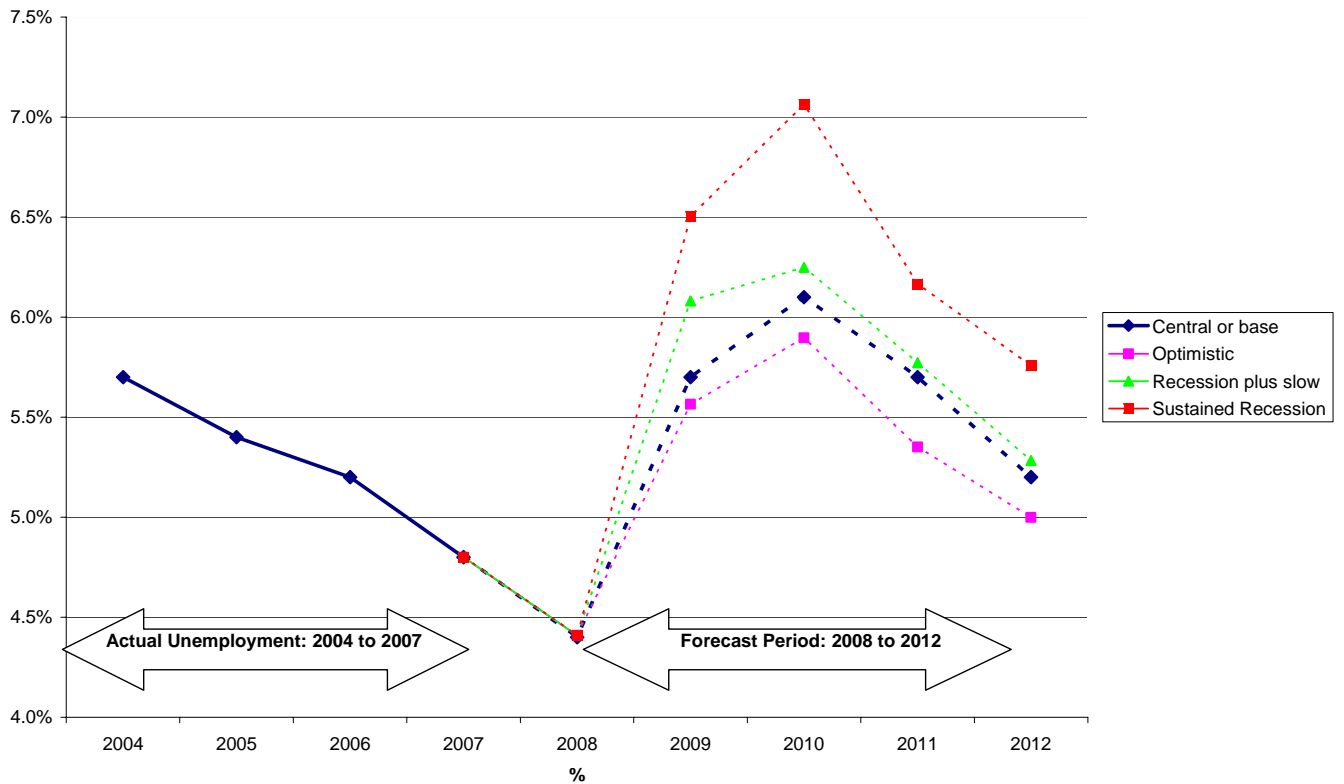
**Figure 10: Forecast Scottish GVA Growth 2008 to 2012 - Different Scenarios**



**Figure 11: Forecast Net Jobs Change, 2008 to 2012 - Different Scenarios**



**Figure 12: ILO Unemployment Rate Forecast, 2008-2012 - Different Scenarios**



# The Scottish economy

## Forecasts of the Scottish economy

### Background

For four years through to mid 2007 the 'global economy boomed' (International Monetary Fund, October 2008), with world growth averaging some 5% per annum, the strongest sustained rate for some three decades. Growth in developing and emerging economies was pronounced with China, India and Brazil reporting amongst the strongest annual growth rates. At the same time inflation remained modest and an image of macroeconomic stability prevailed in both political and financial circles. In the UK policies of targeting inflation levels have been evident since 1997 and a policy of low and stable inflation was evident in the US where Alan Greenspan led the US Federal Reserve.

The general picture was one of relatively strong economic growth; low and stable inflation, matched by low interest rates. Unemployment was falling; investment was rising as were incomes and profits while home ownership was increasing. Fiscal rules were established in the UK so that borrowing would be prudent and only for investment (see the Golden Rule and the Sustainable Investment Rule). Soon global financial innovation led to strong growth in that sector (at the sector's peak it represented 25 per cent of all firms in the Standard & Poor's 500 index whereas at the time of writing it is in the low teens) but across the developed world the authorities favoured light touch regulation.

In these apparently benign conditions countries experienced economic prosperity and were able to pursue a range of social and domestic agendas. House prices, financial stocks and assets, commodity prices, tax revenues, profits, wages etc. all grew at a reasonable rate.

Despite some mild warnings on rising oil prices, the increasing need for financial regulation, rising global financial imbalances, the concerns as to the durability of low interest rates in the long term, as well as rapidly rising house and stock prices; governments, investors and consumers continued to take comfort on the perceptions of macroeconomic stability, continued global low real interest rates and sustainable growth.

In these global conditions household and corporate borrowing rose rapidly from 1998 onwards in the United Kingdom. As the Bank of England noted 'over time, banks took on progressively more credit risk by lending to, for

example, households with high loan to income ratios, leveraged buy out firms and, in the United States, to the sub prime market' (Bank of England, Financial Stability Report. October 2008).

Additionally, more complex financial products using leverage to improve returns emerged in the climate of rising financial liquidity, and as the Bank of England noted, in a context of 'lower discrimination between instruments of differing financial quality' (Bank of England, Financial Stability Report. October 2008). The internationalisation of finance and rising current account surpluses in oil producing and some Asian countries enabled UK banks to dramatically expand their lending. In 2001 UK customer lending was comparable to customer deposits, but 2008 the surplus of lending over deposits was £700 billion, and real leveraged buyout loan issuance rose from under \$100 billion in 2004 to over \$500 billion in 2007 (Bank of England Stability Report October 2008).

The vulnerabilities of these developments became increasingly evident as oil prices rose rapidly (peaking at \$147 in June 2008) driving up energy and food prices and increasing numbers defaulted on sub prime mortgages. As these concerns and the underlying structural problems in the international financial system became apparent there was a sharp increase in financial instability and the 'credit crunch', 'toxic assets' and re-capitalising the financial sector emerged as a popular terms.

## Scottish Forecasts – some scenarios

### Introduction

The last time the FAI forecast was conducted on a scenario basis was in March 2003 to explore the possible outcome and impacts of the war in Iraq on the UK and Scotland. Due to the gravity of the current economic crisis it would be difficult to have a single point forecast due to the multiple competing factors that may influence the course of the world, UK and Scottish economies at this time. For these reasons the forecast has been conducted using four scenarios which have different underlying assumptions. The scenarios, with probabilities, are termed:

- Optimistic scenario (15 per cent probability);
- Central, our base scenario (40 per cent probability);
- Recession plus slow recovery, a worse scenario (35 per cent probability) and
- Sustained recession, a really poor scenario (10 per cent probability).

Each scenario is described in the text while the assumptions are fully documented in Appendix 1. The

focus remains on GVA growth, employment and net job changes as well as unemployment.

### Assumptions for final demand

The central case was used to define the most likely factors to be of importance going forward at this time. Thereafter for each scenario the different outcomes were considered and an interpretation given as to how that would fit with a particular scenario. The critical issues were deemed to be:

- Interest rates and monetary policy;
- Inflationary expectations;
- Re-capitalisation of banks and financial institutions;
- Lending behaviour;
- The impact of the finance sector on the real economy;
- The labour market;
- House prices;
- Government debt, imbalances and fiscal policy and
- Exports.

As usual the drivers of the FAI model are:

- Consumption (C);
- Government spending (G);
- Investment (I);
- Stocks (S);
- Tourism (T) ;
- Exports to the Rest of the UK (XRUK) and
- Exports to the Rest of the World (XROW).

In general terms our expectation is that consumption will contract in 2009 (-0.6 per cent) and only return to near trend by 2011-12. It is clear from UK data, from the relationship between Scottish and UK consumption and from retail sales data etc. that consumption in Scotland is falling.

Government spending is vital in 2009 to help support the economy. Particularly relevant of course is the Government intervention in banks and Bank of England schemes to help support the economy (although this is factored into the assumptions government spending growth rates are taken as that identifiable expenditure seen in Scotland). The UK and Scottish governments, would in the normal course of events, act in a counter cyclical fashion, thus even as signs of recovery are appearing then government spending would start to decline. This is a significant change in the scenarios because compared to the Central scenario there are times when government spending does not decline depending on the assumed economic conditions of the scenario and on timing.

Investment is the driver that is hit hardest by the current economic climate as most businesses have completely abandoned investment plans faced with spiralling costs and the difficulties of securing borrowing at affordable

rates. Investment is expected to shrink by 6 per cent in 2009 and by a further 0.4 per cent in 2010. By 2012 it is only assumed to grow by 2.4 per cent in the Central scenario.

Stocks and tourism are relatively muted with stocks building up just as the turning point of the crisis emerged and tourism has been very poor since 2005 and estimates indicate it may be 2011 before any significant growth is seen.

Exports comprise of two components (XRUK and XROW). XRUK are expected to be poor in 2008 and 2009 but to pick up slightly in 2010. Export performance to the Euro Area and the US is expected to be at its lowest in 2009 (looking forward only) and to grow by 7.1 per cent in 2011. Even the sterling depreciation which should boost exports is more than offset by the decline in demand in the US, the Euro Area and other export markets.

Clearly all the evidence points to 2009 being a very poor year and the expectation is that economic growth will be low; trading conditions will be difficult and the labour market is definitely weakening. Co-ordinated fiscal and monetary policy will be crucial issues across the globe. At the beginning of each scenario there will be a brief explanation about how the drivers of final demand differ from the Central scenario. The Central scenario will be outlined in detail first.

## Four scenarios of possible outcomes

### The Central scenario in detail

The main scenario is one where interest rates are cut to about 3 per cent in 2009 (this scenario was started before the Bank of England cut rates by 150 basis points!) and inflation is relatively muted. 2009 is the year where most of the pain takes place with a sharp contraction in the finance and service sector affecting the rest of the economy. Lending eases after some 12 months and the recapitalisation plan works well although companies (especially small and medium sized firms) find rescheduling debt etc. difficult. The Government's debt rises quickly but compared to other developed nations the debt to GDP ratio remains favourable. House prices contract sharply and continue falling and there is a period of 3-5 years where prices are stagnant. The labour market weakens and exports fall.

### GVA and broad sectoral output

GVA growth is forecast to be 0.7 per cent in 2008 and -1.1 per cent in 2009. Growth in 2011 rises to 1.2 per cent and to 1.5 per cent in 2012. This is presented in Figure 1 and is compared to GVA growth in the other scenarios. This scenario is estimated to be the most probable outcome for the Scottish economy with a 40 per cent probability. Monetary policy, inflationary pressures and the government

recovery plan push the probable outcome to between this scenario and the optimistic scenario. However, the fall in house prices, lending behaviour and labour market weakness pull the probable outcome down toward the recession scenario.

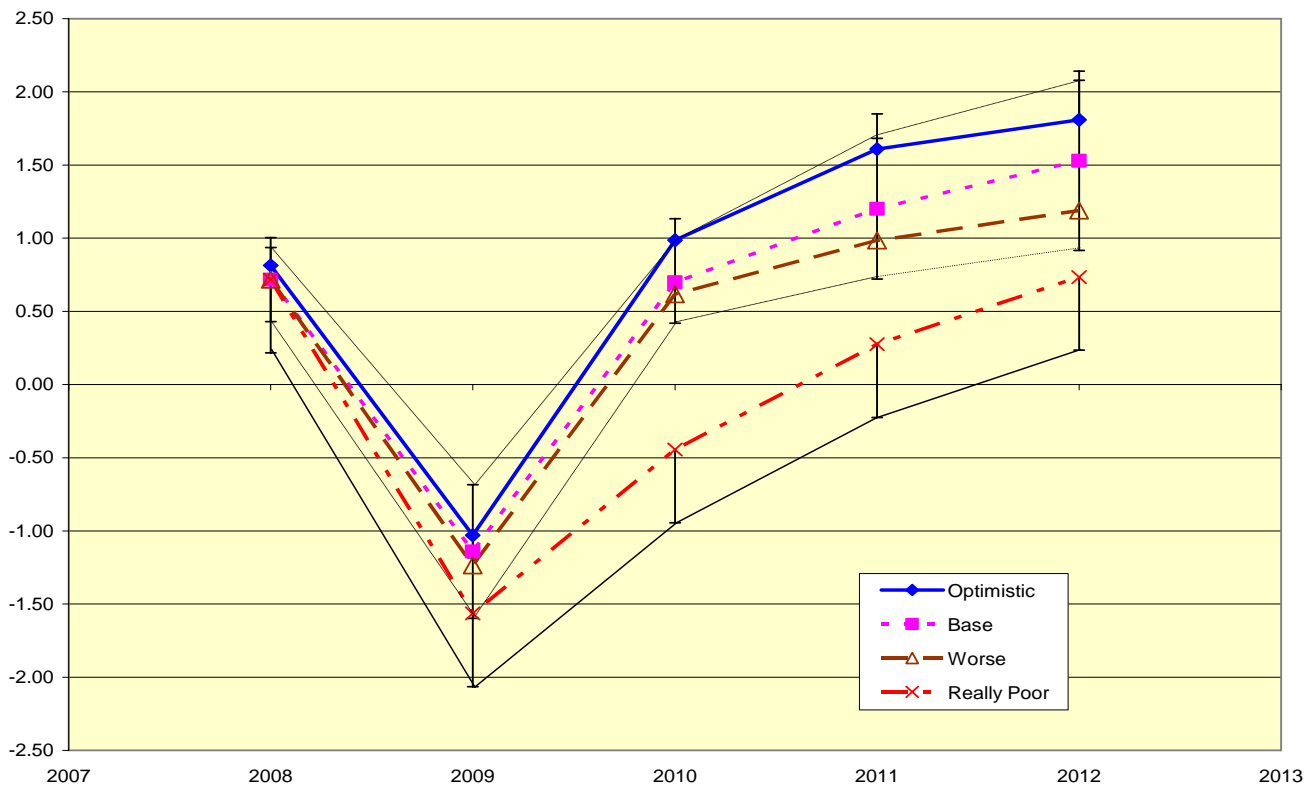
Figure 1 presents the probable path of the growth of GVA under the four scenarios and the Central scenario growth is for a relatively quick return to positive growth following this global shock. There have only been four years since 1964 when GDP growth was negative: 1974 (-0.04 per cent); 1975 (-1.47 per cent); 1980 (-1.93 per cent) and 1981 (-1.38 per cent) and in the years 1986 and 1991 GDP was less than 0.5 per cent. Otherwise the Scottish economy has enjoyed 40 years of economic growth which was strongest in 1964 at 7.57 per cent (Scottish Government GVA Index, 2004 prices).

The service sector usually drives growth in the Scottish economy but due to the nature of the downturn the service sector is likely to bear the brunt of the recession along with construction. Manufacturing and agriculture, while still affected although by a lesser degree. Services are forecast to contract by 1.3 per cent after growth of 1.3 per cent in 2008. It is likely to be 2012 before growth of 1.6 per cent is seen again. It may be 2015 before growth of 2 per cent is experienced.

Manufacturing has had a difficult time over 2005-06 and in 2008. The sector is forecast to contract by 0.1 per cent in 2009 but to grow again by 0.5 per cent in 2010. Growth is forecast to be 1 per cent by 2012. Manufacturing is actually quite strong and resilient despite very difficult trading and lending conditions as firms have become accustomed to this. The sector has been shedding jobs continuously since 1998 but productivity remains good as the sector has had positive growth in 7 of the last 11 years. The main problem (ignoring cash-flow) for growth in this sector is the collapse of investment. Investment in plant & machinery, new technology, training, and productivity is key to the health of the sector. As yet it is unclear how the sector is faring but business survey evidence indicates that manufacturing is in for a difficult time and actual growth may be lower than the forecasts presented here.

Construction grew at a very strong pace in the period 2003-06 but has declined by 2 per cent in 2007 and is forecast to contract by 2.1 per cent in 2008. Growth could shrink by a further 2.4 per cent in 2009 and the sector is not forecast to recover to stronger growth until 2012 although modest positive growth is forecast for 2010

Agriculture, forestry and fishing is forecast to grow by 0.3 per cent in 2008 but to decline marginally in 2009. The sector is forecast to recover gradually through 2010 to 2012. Figure 2 presents growth for 2008-12 for the main sectors of the Scottish economy.

**Figure 1: Comparison of GVA growth under the four scenarios, 2008-2012**

**Source:** Fraser of Allander Institute, University of Strathclyde.

Note: The Central scenario shows two thin lines either side of it outlining the probable spread of forecasts. As time increases this dispersion becomes wider. This scenario is plotted in its mid range.

The optimistic scenario is plotted at the bottom of its range and the error bar shows the probable upward range (no line shown as this is quite small).

The sustained recession scenario is plotted at the top of its range and all the risks are to the downside with this scenario. It is shown with a probable boundary of outcomes by the slightly darker thin line at the very bottom of the chart. This demonstrates that GVA growth could contract at best by 1.56 per cent or at its worst by 2.06 per cent in 2009.

The recession case scenario has no probable outcome shown for the sake of clarity as it is similar to the central scenario probability.

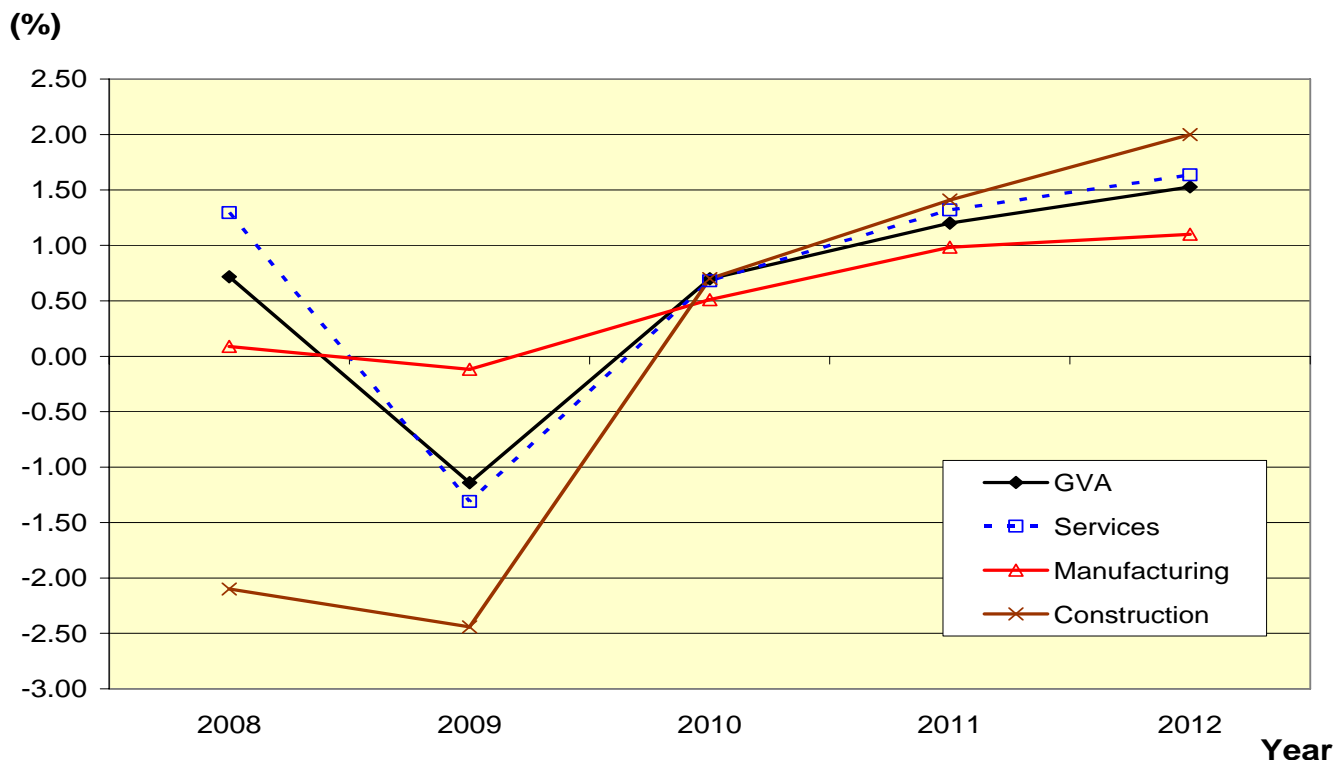
### The Optimistic scenario

The next scenario considers a more optimistic outlook for the economy. Essentially most factors here are optimal e.g. policy, timing, lending behaviour, recapitalisation and in this scenario expectations are exceeded slightly. This scenario has the current Bank of England's monetary response with a deeper and earlier than expected cut in interest rates. It may be that a further 50 basis point cut, say in February, would firmly push this scenario more into the middle ground. The downside factors to this scenario are the apparent reluctance of financial institutions to deal more sympathetically with borrowers with difficulties; the weakening labour market especially the sharp shedding of labour and the problems in the housing market. This scenario has one additional assumption and that is that the homecoming is particularly successful and tourism, retail, transport etc. all benefit from this. The other scenarios assume that 2009 is a credit crunch year in external

economies as well, and despite the weak pound travellers do not respond as anticipated due to falling disposable income and that they face rising costs.

GVA growth in this scenario is forecast to be -1 per cent in 2009 and 1 per cent in 2010. The economy recovers to 1.6 per cent in 2010 and 1.8 per cent in 2012. This is a quick but not a painless transition from the recession of 2009. Nevertheless, all the main sectors still contract in 2009 under these assumptions.

Services shrink by 1.2 per cent in 2009 but grow by 1 per cent in 2010. By 2012 growth in the service sector is close to 2 per cent. Manufacturing performs well with a small decline in 2009 but relatively strong growth in 2010 through to 2012. Investment is expected to pick up in 2011 by 2 per cent and export performance is also estimated to be relatively strong from 2010 onwards. While construction is forecast to decline by 2.4 per cent in 2009, it recovers well

**Figure 2: Comparison of GVA and sectoral growth: Central scenario, 2008-2012**

Source: Fraser of Allander Institute, University of Strathclyde

### **Recession plus slow recovery, a scenario where economic conditions are worse than expected**

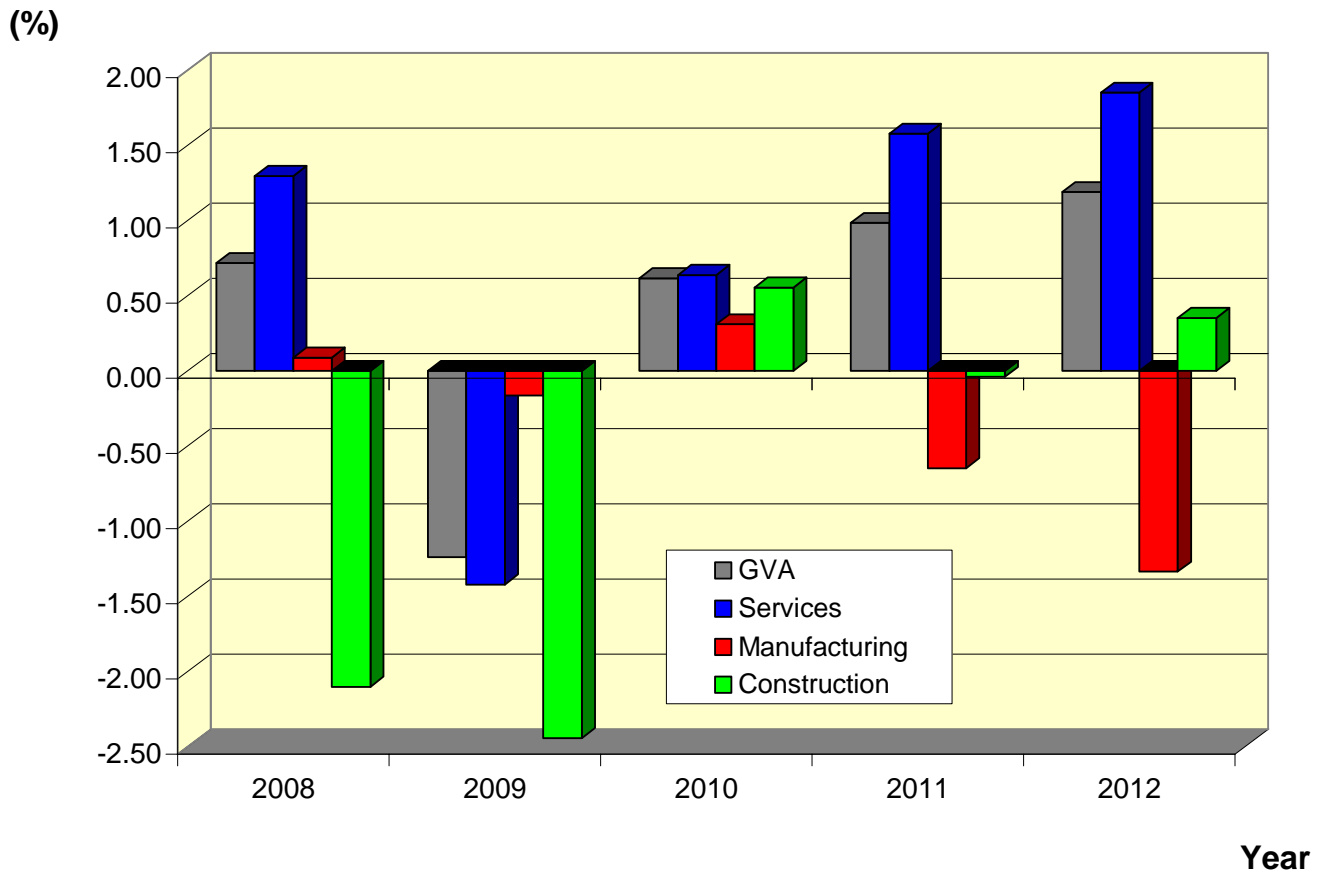
This scenario envisages a situation where the Bank of England takes a more cautious and stepwise approach to interest rate cutting while inflationary pressures begin to build due to fundamentals of oil supply and demand and OPEC action. While recapitalisation works there are some initial problems but crucially lending behaviour does not ease for some time, perhaps 12-18 months. The expectation is that the Bank of England base rate and the interbank lending rate do not converge quickly. These factors mean that the impact of the crisis across the real economy is more acute and particularly small and medium-sized businesses suffer. House prices remain flat for about 5 years as labour market support weakens considerably and unemployment increases more quickly than expected. Exporting firms also face considerable hardship under this scenario.

Growth of GVA in this case is -1.2 per cent for 2009 and recovery is slow with 0.6 per cent in 2010 and just over 1 per cent in 2012. The service sector declines by 1.4 per cent in 2009 and only grows by 0.6 per cent in 2010. By 2012 growth in services is 1.9 per cent. Manufacturing contracts slightly in 2009, has some small positive growth in 2010 but declines again in 2011 and in 2012. This is in part due to very tough trading conditions, slow investment

but primarily because firms find it difficult or expensive to secure funding and capital. Companies in the export market are also more exposed and more likely to contract than grow. This is seen across the forecast horizon. Figure 3 depicts the forecast for the main sectors in this scenario. The plight of manufacturing can clearly be seen as is the obvious reverse in construction. Construction performs poorly in 2011 as this scenario does not have adequate lending, poor labour market opportunities and falling incomes so consumers are not yet ready to step onto the housing market in significant numbers. Furthermore there are significant bottlenecks as public investment projects go ahead (these will have had long lead times) and the situation is not resolved until late 2011 or 2012. Figure 3 also demonstrates the recovery of the service sector and how GVA follows it closely. The last scenario is the sustained recession outcome.

### **The Sustained recession scenario, the worst case scenario for the economy**

The previous scenarios were relatively similar but did have different assumptions and these led to slightly different growth paths. The last scenario; the sustained recession outcome is not included to have something different but because all four scenarios are actual probable outcomes. This however, while having the smallest probability (10 per

**Figure 3: Comparison of GVA and sectoral growth: Recession scenario, 2008-2012**

Source: Fraser of Allander Institute, University of Strathclyde.

businesses and consumers wish to avoid. This will depend upon co-ordinated global monetary and fiscal policy appropriate to country circumstances as well as a domestic agenda that will deliver a recovery that does not simply exacerbate the current situation (as in Japan in the 1990s).

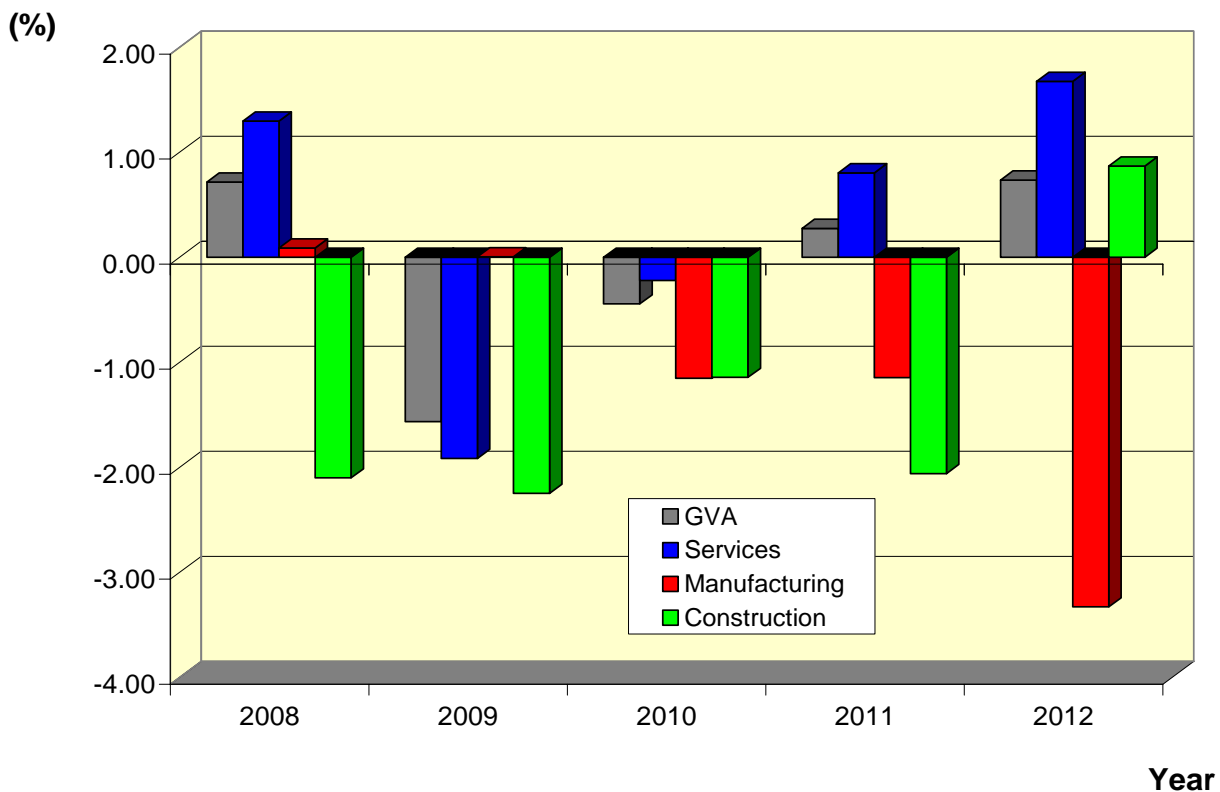
This scenario is real in that further undisclosed losses in the banking system are declared at different times (in the US, UK and Europe). The recapitalisation plan and the scheme on offer from central banks does not cope or is not used appropriately by financial institutions. More capital is required for the world financial system. Lending behaviour is poor and private capital is either slow to respond or is not offered. Thus re-capitalisation takes about 24-36 months before the system is functioning properly again and private capital is attracted back to institutions. Fiscal packages do not give the response required either and banks are unresponsive to business needs. This causes significant hardship in the business community with several large firms in trouble leading to further falls in business and consumer confidence. Cash-flow becomes absolutely critical and job losses are probably severe. The housing market undergoes a prolonged contraction while other asset prices continue to fall. Uncertainty prevails as disposable income drops sharply and wealth shrinks. The

government debt and imbalances grow although they remain favourable compared to other countries. It may even be that the situation causes the government to fall but replacing the government in this way may actually make the situation worse due to catch-up, experience etc. However fear and psychological factors become more important. Exports continue to fall but the weakening pound does set the scene for an export led recovery. The Monetary Policy Committee faces a real dilemma as growth falters but inflationary pressure picks up significantly with oil prices rising to more than \$100 per barrel due to supply and demand imbalances and OPEC action. In Scotland the finance sector may shed between 20-30,000 jobs alone.

In this scenario growth is forecast to be -1.6 per cent in 2009 and is also negative in 2010 (-0.4 per cent). Even by 2012 growth has not recovered to more than 1 per cent. Manufacturing is forecast to stall in 2009 and contracts every year thereafter up to 2012 due to the severe economic conditions. Construction is also negative for the period 2008-11 with growth of 0.9 in 2012.

The service sector decline in both 2009 and 2010 and forecast growth is only modest in 2011. The finance



**Figure 4: Comparison of GVA and sectoral growth: Sustained recession scenario, 2008-2012**

Source: Fraser of Allander Institute, University of Strathclyde

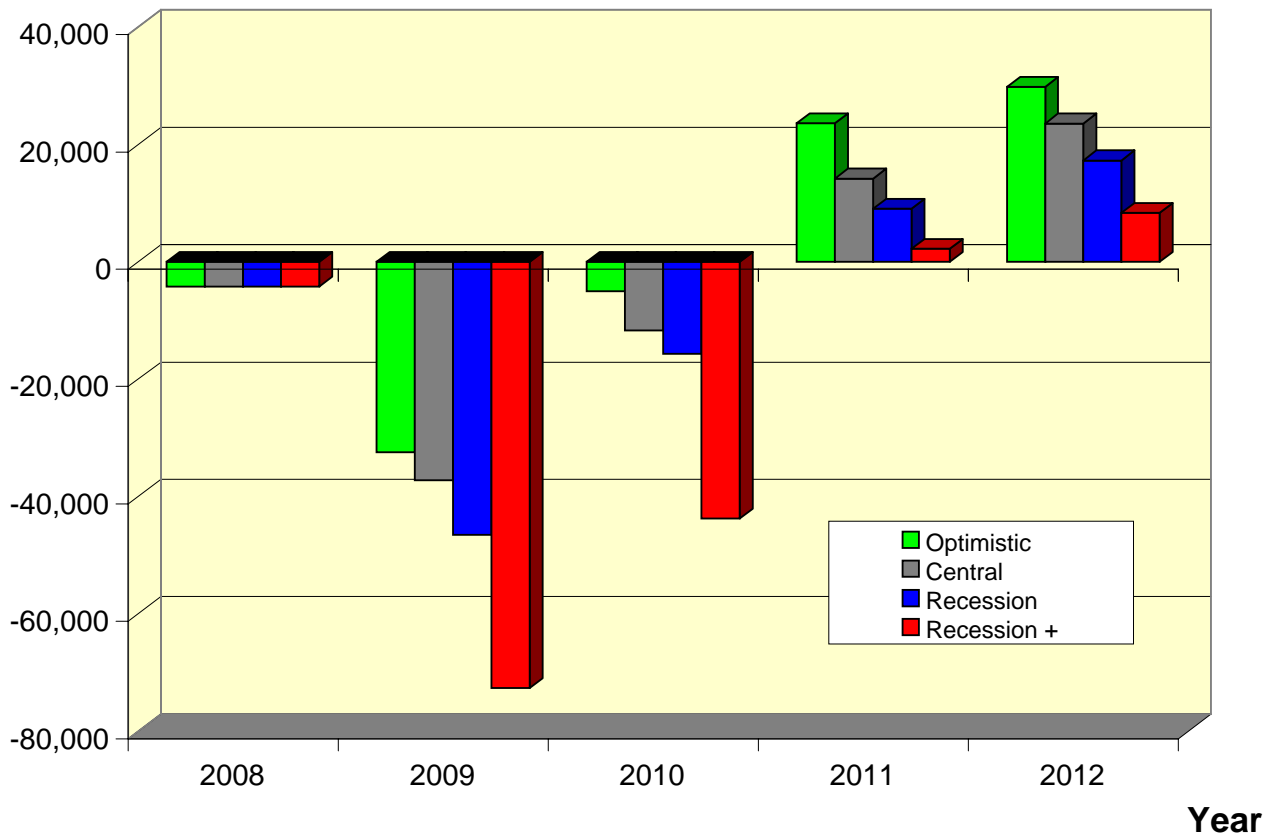
sector contracts sharply in 2008 and 2009. There is no return to strong growth in the forecast period under this scenario. The most important point, if this set of circumstances emerged, is that the economy can only recover slowly and it may take 4-6 years before steady growth is seen again.

This outcome highlights the vital importance of getting policy right and that consumers, businesses, financial institutions as well as government must act responsibly if the economy is to avoid a situation like this. Fortunately the probability of such an outcome is very low at 10 per cent but it still remains a very real possibility and has severe consequences for all concerned. There are several issues that come to light out of this:

- Tax cuts – these should be designed so that real benefits can be realised from cutting taxes. Simply hoarding the money or carrying on irresponsible spending by assuming this is a permanent change or increasing credit levels further will only bring more hardship in the future. Tax breaks for new jobs, retraining or other schemes that help the economy would be particularly useful as is the postponement of new taxes. Simplification of the tax system would also be welcome;
- Monetary policy – it is crucial that the Bank of England (as they have done) remain in control of

the situation rather than being dictated to by economic conditions. They need to get in front of the curve, inter-bank lending rates have to converge while long run interest rates need to stop systemic bubbles as low long-term interest rates encourage low fixed rates on mortgages fuelling housing bubbles;

- Lending behaviour must respond to the needs of the real economy particularly the business sector. Failure to do this will simply drive more firms to insolvency (insolvencies have increased by 25 per cent in England & Wales). Rescheduling mortgage debt is also a priority especially if household income changes;
- The linkages in the economy are relatively fragile and once the credit crunch affects one part it will transfer to other parts due to supplier linkages and sub-contracting etc. Trying to preserve skills, retain labour and maintain orders will be difficult under these conditions and
- The labour market has been buoyant for several years with the Scottish employment rate outperforming the UK employment rate. The indications from economic data, surveys and the forecast demonstrate that jobs are not safe under considerable adverse economic pressure. Job losses are relatively widespread and can be

**Figure 5: Forecasts of net job change: scenario comparison, 2008-2012**

Source: Fraser of Allander Institute, University of Strathclyde.

particularly deep in the scenarios that are more problematic.

### Employment forecasts

Each of the forecasts returned different employment outcomes. These are discussed here. The forecasts of net job changes under the four scenarios are presented in Table 1 and Figure 5.

The net job loss for the Central scenario for 2008 was 4,230 and 37,244 in 2009. Over 2007-12 15,300 jobs are lost in total. Clearly 2009 is the year of peak job loss. The strength of recovery in the years 2011 and 2012 also has marked differences. Over 2007-10 (when jobs are being shed in all scenarios) the job loss is 41,700 in the Optimistic case; 53,100 in the Central scenario; 66,400 in the Recession scenario and finally 110,000 in the final scenario. Similarly the only scenario which gives a positive net job change over the period 2007-12 is the Optimistic scenario where 11,900 jobs are created.

In the Central scenario the service sector supplies 27,900 jobs in 2011-12 compared to 40,400 in the Optimistic case and 23,500 in the Recession scenario while the Sustained

recession scenario see 19,900 jobs created over 2011-12. Services gain 14,740 jobs over 2008-12 in the Optimistic scenario but lose 8,757 in the Central scenario; 22,422 in the Recession scenario and 71,089 in the Sustained recession scenario over the same period of time. Within services the forecast for the finance sector differs considerably according to the assumptions used. In both the Central scenario and the Optimistic case 10,000 jobs are lost whereas in the Recession scenario 14,900 jobs are shed and in the Sustained recession scenario 24,000 jobs are lost in 2009.

Manufacturing loses 1,500 jobs in 2009 and a small amount in 2010 but adds 500 jobs in 2011 and 2012 in the Central scenario. In the Optimistic scenario manufacturing loses the same amount of jobs as in the Central case in 2009 but thereafter job gains are slight greater being close to 1,000 jobs per year in 2011 and 2012. In the Recession scenario manufacturing sheds 3,500 jobs in 2008; 1,600 jobs in 2009 and a further 1,500 in 2011. In the last scenario this sector sheds a considerable amount jobs every year and in totals this amounts to 16,836 over 2008-12.

**Table 1 Net Job Change Forecasts: Scenario comparison, 2008-2012**

	2008	2009	2010	2011	2012	2007-10	2007-12
Optimistic	-4,230	-32,470	-4,992	23,669	29,876	-41,692	11,853
Central	-4,230	-37,244	-11,638	14,222	23,605	-53,112	-15,285
Recession	-4,230	-46,498	-15,662	9,081	17,318	-66,389	-39,991
Sustained recession	-4,230	-72,639	-43,776	2,236	8,371	-120,644	-110,038

**Source:** Fraser of Allander Institute, University of Strathclyde.

**Table 2 Unemployment Forecasts: Scenario comparison, 2008-2012**

	2008	2009	2010	2011	2012
ILO					
Optimistic	4.4%	5.6%	5.9%	5.4%	5.0%
Central	4.4%	5.7%	6.1%	5.7%	5.2%
Recession	4.4%	6.1%	6.2%	5.8%	5.3%
Sustained recession	4.4%	6.5%	7.1%	6.2%	5.8%
CC					
Optimistic	2.8%	3.3%	3.3%	3.1%	2.9%
Central	2.8%	3.1%	3.4%	3.3%	3.1%
Recession	2.8%	3.6%	3.7%	3.3%	3.2%
Sustained recession	2.8%	4.0%	4.3%	3.6%	3.4%

**Source:** Fraser of Allander Institute, University of Strathclyde

## Unemployment forecasts

It has been some time since unemployment was relatively high in Scotland and even when electronics collapsed in 2001-02, the service sector took on a lot of workers and the rise in unemployment was relatively muted. There are clear signs of rising unemployment in the economy and of fewer vacancies while business surveys indicate employers' intentions on recruitment are currently negative. The forecasts of unemployment for ILO unemployment and the claimant count measure are presented below.

Unemployment on the claimant count measure is relatively benign in the Optimistic scenario although ILO unemployment peaks in 2010 at 5.9 per cent. 2010 tends to be the year that ILO unemployment peaks in for all of the other three scenarios as well. Unemployment at 7.1 per cent is particularly high in the Recession plus scenario. The significant difference between 6.2 per cent (Recession) and the 7.1 per cent (Sustained recession) is something that policymakers need to heed.

Claimant count unemployment is relatively muted in the Optimistic scenario and likewise does not pose too much of a problem in the Central scenario. In the Recession scenario and in the Sustained recession case it is more noticeable and may be a particular problem in the Sustained recession scenario if this actually came about.

## Conclusion

The forecasts assumed four different outcomes for 9 factors which combined to give the forecasts as described above. The Optimistic scenario is where most factors are dealt with in an optimal way leading to the least disruption to the economy. The Central scenario (40 per cent probability and the outcome most likely to happen) indicates that 2009 is a problem year for output and that 2010 is the year in which unemployment peaks. Net job change is negative in 2008 and 2009 but recovers thereafter. The Recession scenario is one where economic conditions are worse than expected and some particular problems occur but overall there is a general worsening of conditions making it more difficult across the economy.

Small and medium-sized businesses are expected to find this scenario tough with hiring, lending, cash-flow, job losses and exporting being problematic areas. In the last scenario, the sustained recession scenario, the main problem is that recapitalisation did not work as effectively as hoped while lending behaviour is poor and even large firms struggle. Inflationary pressures also return in this scenario giving it more problems. The outcome is that there is a sharp contraction in activity in 2009 and a very slow recovery that does not follow the paths of the other three scenarios. While it only has a 10 per cent probability it still remains a distinct possibility. All the risks in this scenario are on the downside. Policymakers need to guard against complacency and to watch that none of these factors come into play.

Kenneth Low  
11 November 2008



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## Appendix 1

The assumptions for the four scenarios considered are presented here in the appendix.

### Central scenario:

- Interest rates are cut in a cautious but responsive approach to around 3 per cent by 2009. The November cut is deeper than the others although a similar cut may be implemented in January or February. By mid 2009 the Bank of England will have reduced interest rate to about 3-3.25 per cent;
- Inflationary expectations are relatively muted as oil settles to approximately \$90 per barrel;
- The banks take up the government re-capitalisation scheme as well as taking advantage of the Bank of England schemes. The period of re-capitalisation is expected to last for about 18-24 months. Private capital is also raised;
- Lending behaviour initially does not change significantly in the short run and despite interest rate cuts, interbank lending rates (Libor) do not converge on the base rate (set by the Bank of England) as quickly as the Government and the Bank of England would like. Lending eases somewhat however after about 12 months and definitely much more within 18 months;
- The impact of the financial sector crisis is felt across the real economy as investment rapidly shrinks and lending constraints hit small and medium-sized businesses particularly hard. Cash-flow for these firms becomes a critical issue in the struggle for survival. Only after prolonged lobbying and negotiation with government do financial institutions respond to the need for an improvement in helping companies with rescheduling debt, future funding and finance packages. Within the finance sector itself about 10,000 jobs are lost;
- Many firms experience financial hardship and lay off workers from the end of 2008 and throughout 2009. Unemployment rises considerably in 2009. Household disposable income tightens sharply and labour market opportunities become fewer;
- In the housing market prices continue to fall through 2009 and into 2010. House prices remain flat for about 3-5 years before growth is seen again;
- Government debt and imbalances widen as debt rises sharply in 2009. The planned economic recovery works relatively well however and government debt is favourable when compared to some other developed nations (as a percentage of GDP) and
- Exports fall as domestic demand in the US and Euro Area contract quickly and substantially. Imports to the UK fall by a greater amount therefore there is a net gain. Although sterling depreciates the stimulus this gives to boosting

exports is completely offset by the reduction in demand elsewhere.

### Optimistic scenario:

- Interest rates are cut more sharply to 3 per cent by early to mid 2009 using an initial cut of 1 per cent in November. Subsequent cuts are smaller but may be of a further 50 basis points in December/January/February. By the middle, and certainly by the end of 2009, the Bank of England will have reduced the base rate to 2.5-3 per cent;
- Inflationary expectations remain low as oil prices are close to \$80 per barrel throughout 2009. There is no evidence of previous higher prices feeding into wage claims;
- The banks eagerly take up the government re-capitalisation scheme as well as the Bank of England initiatives. The period of re-capitalisation is boosted by external private capital as well as a greater response by institutional investors. Banks with expected future prospects that are better than others benefit more and can redeem some preferences shares and re-negotiate dividends conditions. Share prices begin to rise more steadily by the end of 2009 as new management teams tackle the problems in the sector in an effective and efficient manner. A better performance is seen within 12 months although full recapitalisation still takes 12-18 months;
- Lending behaviour the very short-term remains constrained but by early 2009 business terms are beginning to ease, thus helping firms with significant cash-flow and funding issues. Interbank lending rates do not converge on the base rate as quickly as perhaps desired but there is a clear downward movement towards it. Lending eases significantly after about 12 months;
- The short-run impact of the financial sector remains sharp across the real economy and investment contracts quickly. Small and medium sized businesses do not experience any benefit until at least mid 2009. Cash-flow remains a key issue. The finance sector, independently and relatively quickly develop strategies to help businesses reschedule debt etc. Within the finance sector itself about 5-7,000 jobs are lost;
- Companies still experience financial hardship and lay off workers from the end of 2008 and throughout 2009. Unemployment rises significantly in 2009. Household disposable income tightens sharply and labour market opportunities become fewer, but there is an easing in the labour market towards the end of 2009 as the rate of job loss slows thus easing the pressure on unemployment;
- House prices fall through 2009 and into 2010. House prices remain flat for approximately 3 years rising again, although at a modest pace initially;

- Government debt and imbalances widen as debt rises sharply in 2009. Depending on whether or not the banking and the financial sector needs more debt which may be taken on by the government or the Bank of England as they help institutions through the crisis. It is not envisaged that this would be anything like the recent recovery plan just modest additional resources to smooth the current functioning of the current plan. The planned economic recovery works better than expected and government debt is still favourable when compared to some other developed nations (as a percentage of GDP). Financial institutions are in a much healthier and stronger position by the end of 2009 and certainly by mid 2010 and
- As in the previous scenario exports fall as domestic demand in the US and Euro Area contract quickly and substantially. Imports to the UK also fall by a greater amount giving a net gain. The sterling depreciation stimulates exports slightly more than expected but this is still completely offset by the reduction in demand.

#### **Recession scenario:**

- Interest rates are cut in a cautious approach to around 3.5 per cent by 2009. There is not a deep policy induced cut in November or February (although a cut of 50 basis points may take place in November). By mid 2009 the Bank of England will have reduced interest rate to about 3.5 per cent with the possibility of a further cut to 3.25 per cent;
- There is significant concern over inflationary pressures as OPEC push the price of oil towards \$100 per barrel. Demand for oil remains high in China, India and the emerging economies while geopolitical factors hinder supply slightly;
- The banks and the government re-capitalisation scheme goes ahead with minor difficulties arising around the conditions of the offer. The Bank of England scheme is taken up without any problems. Private capital is slightly discouraged by future economic prospects and recapitalisation takes longer than expected, perhaps as long as 18 months or slightly more. Private equity returns to the banks after this period and share prices begin to rise significantly again;
- Lending behaviour does not change significantly and businesses are not given the chance to re-schedule debt or to obtain additional funding from the UK finance sector in either the first quarter or first half of 2009. The gap between the Bank of England base rate and the Libor rate for bank inter-lending does not improve significantly with rates at around 1 percentage point above the base rate. Lending only improves after about 12-18 months;
- The impact of the financial sector crisis across the real economy is slightly more painful with sharp

contractions in investment, consumption, lending and hiring which initially affects mostly small and medium-sized businesses, however now large firms are feeling a significant impact from this. Cash-flow becomes tighter and more firms fail. It takes longer for the financial sector to respond to the needs of business. Within the finance sector itself about 15,000 jobs are lost;

- Most firms experience financial hardship and lay off a considerable number of workers in 2009. Unemployment increases by more than expected in 2009. Household incomes drop and the labour market weakens considerably making conditions tougher throughout 2009 and into the early part of 2010;
- House prices fall more than expected in 2009 and weaken again in 2010. After this house prices remain flat for about 5 years before growth is seen again;
- Government debt and imbalances widen as debt increases but it only increases relatively slowly following the initial recovery plan. The planned economic recovery is slower than expected as confidence falls further. Government debt remains favourable when compared to some other developed nations (as a percentage of GDP) and
- Exports continue to fall as domestic demand in the US and Euro Area contract quickly and substantially. Imports to the UK fall by a greater amount therefore there is a net gain. Although sterling depreciates the stimulus this gives to boosting exports is completely offset by the reduction in demand elsewhere. It takes longer for exporting firms to recover from the crisis and a significant number go out of business.

#### **A Sustained recession scenario:**

- Interest rates are cut in a responsive approach to around 3-3.5 per cent by 2009. A cautious and stepwise approach is taken. The Bank of England fails to get in front of the curve;
- Inflationary expectations are a significant concern as demand for oil outstrips supply. The price of oil increases to above \$100 per barrel in 2009 due to a combination of OPEC action and supply/demand fundamentals;
- The banks take up the government re-capitalisation scheme as well as taking advantage of the Bank of England schemes. A major problem remains exposure to toxic US assets and loans as well as how the sector deals with these. There is little response from private investors and further losses come to light. There is significant disquiet about dividends and institutional investors remain unhappy with performance. Relations between government and the finance sector worsen. Some institutions need further help from government. The period of re-capitalisation is expected to last for about 24-36 months;

- Lending behaviour does not change significantly causing problems in the real economy. Although the base rate is cut, interbank lending remains difficult causing financial institutions more difficulties. Lending only eases after about 18-24 months;
- The impact of the financial sector crisis is sharply felt across the real economy for a prolonged period of time. Confidence is badly shaken and consumption, investment, lending, hiring, training and exports are hit hard. Although small and medium-sized businesses suffer significant cash-flow problems with rising insolvencies, the main concern is over large firms and falling payrolls. Further government intervention is required to help financial institutions to cope with the increasing demands of companies. The finance sector may shed up to 20-30,000 jobs as there is a significant contraction in the sector. External takeovers cannot be ruled out;
- Firms shedding labour becomes a major problem from 2009 onwards. Unemployment rises considerably in 2009 and continues increasing into 2010. Households suffer a contraction in wealth as incomes fall and asset prices suffer;
- The housing market suffers a prolonged contraction through to the end of 2010 and perhaps into early 2011. House prices remain flat for about 5-8 years before growth is seen again;
- Government debt and imbalances grow in 2009 and in 2010. The planned economic recovery is not as effective as thought and takes significantly longer. Government debt is favourable when compared to some other developed nations (as a percentage of GDP) but is forecast to climb perhaps by a further 5 percentage points from its current forecast in the period 2010 to 2015 and
- Exports fall as domestic demand in the US and Euro Area contract. Imports to the UK fall by a greater amount therefore there is a small net gain. Sterling depreciates in 2008 but then falls further again as the economic crisis worsens. This gives the basis for an export led recovery as the Euro Area recovers slightly.

# A review of Scottish Business Surveys July – October 2008

## Overall

Negative trends were widely reported in most surveys. The PMI Scotland Report for September noted a 'further marked deterioration in operating conditions in the Scottish private sector. Output, new business and backlogs of work all declined during September'. The Lloyds TSB Scotland Business Monitor noted 'growth in the Scottish economy grinding to a halt in the summer of 2008'. The Scottish Chambers of Commerce, commenting on their latest survey, talked of the 'looming recession' and 'harsh trading conditions'. Scottish Engineering and CBI trends reported falling order intake for the first time for four years. The SRC Scottish Retail Sales Monitor reported the flat trend (0.0%) in the year on year trend in like for like sales and commented on the 'worst Scottish sales since March 2006' (the previous Monitor had noted the worst August sales since 2005).

Whilst record weak trends were reported as indicative of the impact of the recession in the 'real economy' it is important to consider the methodology adopted by most business surveys. Most national surveys, seek evidence as to changing trends, and use net balances as the key survey statistic. Typically surveys ask their respondents to indicate whether the trend, over the past three months, and expected for the next three months, is either 'up', 'level' or 'down'. The net balance for such survey questions is defined as the number of 'up' responses minus the number of 'down' responses to each survey question. Hence a positive net balance indicates a rising trend, and a negative net balance a declining trend. The current strong negative trends in business confidence, for example, widely reported in recent months, can be interpreted as either evidence of more strongly declining falls in business confidence, or as weakening trends in business confidence being more broadly reported. It is important to look behind the headline trends to understand more clearly the experiences and expectations amongst Scottish business as to the severity of the likely recession. There is clear evidence of reduced levels of activity in manufacturing, construction and tourism compared to a year ago, and sales trends are likewise weaker than for some time. Recruitment activity and total hours worked are likewise weaker than in 2007. Nevertheless, the alarmist interpretations of these results should be treated with some caution.

## Production

The Lloyds TSB Scotland Monitor (to end August 2008) reported modestly rising trends, but noted these were markedly weaker than a year ago. Looking forward (to end February 2009) 40% of respondents anticipate a decline in the volume of business, although modestly rising trends in export activity are forecast; however costs pressures are expected to remain widespread with 71% anticipate rising costs over the next six months.

## Manufacturing

### Confidence and Orders

Business confidence, where reported, was widely depressed, more so than trends in business activity. The Scottish Chambers' Business Survey and PMI Scotland Report, both to the end September, noted a slight improvement (although within the context of continuing weakening trends) in manufacturing output, new orders and backlogs of work. Nevertheless, the accompanying commentary focussed on 'faltering market conditions', a 'sharp contraction in new orders' and 'a significant contraction in the level-of-work in hand'. A slight downturn in manufacturing orders was also noted in the third quarter results for Scottish Engineering, The CBI manufacturing survey asks if order books are above, at or below normal levels, their latest surveys suggest declining current and future order book trends becoming more broadly based.

The Scottish Chambers' Business Survey noted a net of small, medium and larger firms reporting declining trends in the level of work in progress. Unlike other surveys the Scottish Chambers' Business Survey seeks evidence as to average capacity used and noted this had eased further to 73.6%, some five percentage points lower than a year ago, and the percentage reporting capacity used being below preferred levels had risen to 65%, some fifteen percentage higher than a year ago.

### Costs/Prices

The PMI report noted input prices 'rose at a considerable pace during September.' Rising costs prices remain evident. In the Scottish Chambers' Business Survey the proportion reporting being under pressure to raise prices due to raw material costs has averaged over 80% in 2008, the proportion reporting increased pressures due to other overheads (utility, insurance and other charges) has increased by some thirteen percentage points and transport costs by twenty one percentage points in 2008, and was widely reported by panel members of the PMI Report. Both the PMI Report and the Scottish Chambers' Business Survey noted a slight easing in the rate of increases in prices charged.



## Employment

Scottish Engineering reported modestly rising trends in employment, although weaker than in previous quarters, 'overall demand for staff is being maintained particularly for small companies'. In contrast the PMI Report noted 'job losses in manufacturing were considerable' as it reported the third month of declining trends. The Scottish Chambers' Business Survey noted a slight decline. A closer examination of the results in the three surveys show strongly similar patterns, the majority of respondents (74% in the PMI Report, 64% in Scottish Engineering and 71% in the Scottish Chambers' Business Survey) reported no change and the percentages reporting increasing levels in employment in the third quarter ranged from 7% in the PMI Report, 11% in the Scottish Chambers' Business Survey to 22% in the Scottish Engineering Quarterly Review). Both the Scottish Engineering and Scottish Chambers' quarterly surveys reported slightly more respondents reporting a weakening in total hours worked.

Average pay increases in manufacturing have remained around 3.66% through the year.

## Construction

### Confidence and Orders

The Scottish Chambers' Business Survey noted the percentage of firms reporting declining business confidence was the highest ever reported. Eighty per cent reported being less confident than a year ago, again reflecting concerns as to credit issues and the sharply declining trends in domestic/house build contracts.

The declining trend in new contracts strengthened in the third quarter, with a sharp downturn in the trends in private commercial and domestic/ house build contracts, and more modestly declining trends in public sector work. Now only 41% (52%, 69%, 71% and 86% in the previous four quarters) expect level or rising trends in the level of work through the next six months.

Expectations as to turnover trends over the next year have weakened significantly over the past two quarters. In the third quarter a net of 37% (25% in quarter two) anticipate declining turnover trends over the next year (in contrast rising net trends of 3%, 10% and 29% were reported in the preceding three quarters). A net of -54% (-49% and -3% in the previous two quarters) anticipate declining profitability over the next twelve months. Seventy-four per cent of construction firms anticipate declining tender margins over the next twelve months.

Average capacity declined to 79%, down nine percentage points over the year, and 43% reported and 59% expect a declining trend in the level of work in progress, again the weakest trends in the history of the survey.

## Costs/Prices

Expectations of lower trends in turnover and tender margins in 2009 were widely reported in the Scottish Chambers' Business Survey for the third quarter as were rising trends in building and other costs.

## Employment

The Scottish Chambers' Business Survey notes a slight weakening trend in employment in the third quarter, although rising trends in overtime were noted; looking ahead to the fourth quarter, expectations of staff and overtime reductions are more broadly based. Possibly more significant is the declining proportions of firms seeking to recruit, down fifty-one percentage points over the year.

Average pay increase in quarter three eased slightly to an average of 4.11%.

## The Service Sector

Both the PMI Report and The Lloyds TSB Monitor noted a decline in service sector activity. The PMI noted declining trends being reported in business, financial services and tourism. The Lloyds TSB Monitor noted 'service businesses are affected more than manufacturing', with service sector turnover now having fallen for five consecutive quarters. The PMI and Lloyds TSB Monitor both noted declining trends in volumes of repeat and new business. Expectations for the six months to February 2009 remain depressed. All the main surveys noted strongly rising cost pressures.

## Retail distribution

### Optimism and Sales

The Scottish Chambers' Business Survey reported that the widespread deterioration in business confidence continued, reflecting continued concerns as to declining consumer confidence, credit restrictions and spending. The Chambers' survey noted declining business confidence in 2008 has consistently been the most broadly based ever recorded by the survey.

The Scottish Retail Consortium – Nielson Shop Price Index (September) noted year on year price inflation in Scotland at 4.3%, but with some signs of easing prices as some of the earlier cost price increase in food start to annualise. However like-for-like sales were flat in September (a combination of rising food and falling non-food sales), and total sales in September were 4.6% higher than a year ago, but this rise was only due to rising food sales, non food sales fell slightly in September.

Both the CBI and Scottish Chambers' Business Surveys reported declining sales trends. Half of the retailers in the

October CBI survey, and 59% of retailers in the Scottish Chambers Survey (three months to end September) reported declining sales trends.

### **Costs/Prices**

The Scottish Chambers' Business Survey noted cost pressures were again more evident in the third quarter with over 70% citing raw material and utility costs, and over 65% citing transport costs. Cost pressures were again more widely reported by independent retailers.

### **Employment**

The Scottish Chambers' Business Survey noted changes in employment levels were by less than a quarter of respondents, nevertheless, declining trends in full time, temporary and permanent employment and overtime working were reported. In common with other sectors the proportion seeking to recruit staff in the third quarter was significantly lower than a year ago. Average pay increases in the third quarter were reported at 4.32%, slightly higher than earlier in the year.

### **Tourism**

#### **Optimism and Demand**

Weaker trends in business confidence were widely reported in the third quarter by the Scottish Chambers' Business Survey. Visit Scotland noted bed and room occupancy some 3% lower in August 2008 compared to same month in 2007, whilst the Scottish Chambers' Survey data for the three months to end September reported occupancy some five percentage points lower than a year ago.

Weak trends in demand were more widely reported than in previous third quarters for the past ten years of the Scottish Chambers survey, with weaker trends in demand for restaurants and function/conference facilities.

A net of -33% reported declining turnover trends (compared to a decline of -8% and increases of 10% and 38% in the previous quarters) and a net of -43.5% (-22.4%, -34% and -5% in the previous three quarters) reported falling trends in margins. Overall tourist demand accounted for 54.2% of total demand with local trade generating 25.5% and the balance was business demand.

Underlying these trends was a lack of demand, reported by 90% of respondents to the Scottish Chambers' Business Survey.

### **Employment**

Changes in employment levels were reported by 38%, net declining trends in full time, part time, seasonal and overtime working were reported. In common with other sectors the proportion seeking to recruit staff in the third

quarter of 2008 was more than ten percentage points lower than a year ago.

### **Outlook**

All surveys note the slowing down in the Scottish economy becoming more evident over the third quarter, with the services sector being more affected than manufacturing. Manufacturing still expects better trends in export orders, but this will depend on developments in the main markets. Results in the construction sector remain dominated by the housing market; although the levels of public sector work appear less affected. Tender prices and margins are expected to remain depressed over the next year. In the services sector sales trends, and expectations for the next quarter, remain weak. Activity will be affected by continuing credit concerns, weakening demand and recession in major markets. Declining consumer confidence is widespread. Developments in the international economy will be the key factor over the next months.

Eleanor Malloy/Cliff Lockyer  
28 October 2008

Current trends in Scottish Business are regularly reported by a number of business surveys. This report draws on:

1. The Bank of Scotland's Leading Indicators published September 2008 and Quarterly Labour Market Report for the second quarter of 2008;
2. The Confederation of British Industries Scottish Industrial Trends Survey for the quarter to September 2008;
3. Lloyds TSB Business Monitor for the quarter to August 2008 and expectations to February 2009;
4. Scottish Engineering's Quarterly Review for the third quarter 2008;
5. The Royal Bank of Scotland's Monthly Purchasing Managers' Index to end September 2008;
6. The Scottish Retail Consortium's Monthly Scottish Retail Sales Monitor to October 2008;
7. The Scottish Retail Consortium - Nielsen Shop Price Index for September 2008;
8. The Scottish Chambers of Commerce Quarterly Business Survey, reports for the second and third quarters of 2008;
9. BRC-KPMG Retail sales monitor September 2008;
10. Halifax House Price Index October 2008;
11. Visit Scotland Occupancy Index to August 2008.

# Overview of the Scottish labour market

Comparable figures on the labour market<sup>1</sup> between Scotland and the United Kingdom in the second quarter of 2008 are summarised in Table 1. Labour Force Survey (LFS) data show that in the second three months of 2008 the level of employment in Scotland rose by 0.2 per cent, to 2,543 thousand. Over the year to June 2008, however, employment in Scotland fell by 13 thousand, approximately 0.5 per cent. For the same period, UK employment rose by 1.3 per cent. The Scottish employment rate – those in employment as a percentage of the working age population – was 76.4 per cent, unchanged on the previous quarter but down 0.7 per cent compared to one year earlier.

Figure 1 provides an account of Scottish quarterly LFS employment over a sixteen-year period to the most recent quarter – the earliest for which comparable figures are available. Employment levels remain close to historical highs, reached in Q2 2007. A comparison of the residence-based employment rates for the regions of the UK in Q2 2008 is provided in Figure 2. Scotland's employment rate gives it the fourth highest employment rate of all regions in the UK, behind the South East, South West and East of England. Figure 3 shows that as well as in Scotland, five other regions of the UK have seen a fall in the employment rate in the last twelve months, with greatest fall (-1.1 per cent) seen in the North East.

Table 1 shows that for Scotland the preferred International Labour Organisation (ILO) measure of unemployment fell by 9.3 per cent to 113 thousand, between the first and second quarters of 2008. This equates to a 7.5 per cent annual decline in the number unemployed under this measure<sup>2</sup>. The ILO unemployment rate fell in the three months to June 2008 and now stands at 4.2 per cent. This represents a 0.5 per cent fall over the last quarter and a 0.3 per cent fall relative to the same period a year earlier (4.5 per cent). The comparable ILO unemployment rate for the UK stands at 5.4 per cent, and is up 0.2 per cent over the most recent quarter, and unchanged relative to the same period a year earlier. Figure 4 shows the ILO unemployment rate for Scotland and the UK from Q2 1992 to Q2 2008. This shows that Scotland's ILO unemployment rate has been below that of the UK since the start of 2006, and was previously only below that of the UK when both rates were significantly higher in the period to the mid-1990s.

The economically active workforce includes those individuals actively seeking employment and those

currently in employment (i.e. self-employed, government employed, unpaid family workers and those on training programmes). Table 1 shows that the level of the economically active fell by 0.2 per cent between Q1 2008 and Q2 2008. There were 2,655 thousand economically active people in Scotland during Q2 2008. This comprised 2,543 thousand in employment and 113 thousand ILO unemployed. The level for those of working age economically inactive rose in the last quarter, up 2.3 per cent on the previous quarter to 644 thousand people. This indicates an increase of 5.2 per cent in the number of people of working age economically inactive over the last year.

The most recent (seasonally adjusted) figure for Jobseekers allowance claimants in Scotland stood at 81.8 thousand in September 2008, up 3.1 thousand from the previous month. The claimant count rate in September 2008 stood at 3.0 per cent. This is up 0.1 per cent from the previous month, but up 0.5 per cent since the start of 2008. In April 2008, the Scottish claimant count rate was identical to the UK claimant count rate at 2.5 per cent, but both have risen in the last five months. The UK claimant count rate in September was slightly lower than the Scottish rate at 2.9 per cent. Figure 5 shows the claimant count rates for Scotland and the UK since comparable records began in April 1974. Over this period, the Scottish claimant count rate has historically been greater than the UK claimant count rate.

Figure 6 shows the inflows, outflow, and net flows onto Jobseekers Allowance in Scotland between November 1988 and the most recent data (July 2008). The reduction in the claimant count unemployment over recent years can be seen by the greater outflows than inflows over much of this time period. The recent sharp increase in claimant count levels can be seen by the increase in the scale of inflows to Jobseekers allowance since March 2008, while the number of outflows from Jobseekers allowance have remained approximately constant. Since June 2008, more than 2000 additional people a month in Scotland have begun receiving Jobseekers Allowance than have stopped receiving Jobseekers Allowance.

Figure 7 plots ILO and claimant count unemployment in Scotland for three-month periods as an index for the period Q1 1999 to Q2 2008 (where on both series Q1 1999 = 100). Claimant count unemployment has generally fallen over this period, and, after a slight rise during 2006, has recently begun declining again. The largest increases seen in the claimant count measure of unemployment in the most recent months is not seen in this diagram since it ends at Q2 2008. By comparison, ILO unemployment has fluctuated widely, but still generally on a downward trend and most likely reflects movements between the level of employment and the number of people economically active at any one time. Hence, the difference between the ILO and claimant count definitions mirrors the distinction

between those actively seeking work (but are jobless) and those who are eligible for unemployment benefit payments.

Due to changes in the way in which these data are collected, consistent data on the level of unfilled vacancies in the Scottish and Great Britain labour market are only available from May 2006. We report standard live unfilled vacancies, which are vacancies for an employee (rather than self-employed) person and are notified through a Jobcentre. The proportion of total vacancies which this measure represents will therefore change over time as the industrial sector and region of the vacancies changes. Such measures are useful however for a snapshot of vacancies in the Scottish economy. In April 2008 there were a total of 31,592 live unfilled vacancies, with 4,457 "skilled" vacancies across Scotland. Figure 8 shows the spread by local authority of the "skilled" vacancies<sup>3</sup> across Scotland in April 2008 and then in September 2008. While the largest number of such posts in September 2008 are in Edinburgh and Glasgow, as in April 2008, the number of "skilled" vacancies in Edinburgh is slightly over half of those available in Glasgow.

The most recent figures for the number of employee jobs by industrial activity are detailed in Table 2. Employee job figures are a measure of jobs rather than people. Total seasonally adjusted employee jobs for the quarter ending June 2008 stood at 2,387 thousand, unchanged from the previous quarter, and 7 thousand higher than the same period a year earlier. The number of jobs in the manufacturing industry continues to fall, and now stands at 218 thousand, down 2 thousand from the previous quarter, and down 6 thousand against the same quarter one year earlier. The number of jobs in the service industry rose by 5 thousand over the last quarter to 1,112 thousand, and there are now 12 thousand more jobs in the service industry than the same period ending a year earlier.

## Outlook

Scotland's labour market continues to perform strongly in light of extreme global uncertainty. The level of employment has risen in the second quarter of 2008, while over the last year the employment rate has fallen slightly. Overall Scottish employment growth has been stronger than in UK over the last quarter, while the opposite is true for the last year. Scotland's unemployment levels and rates, on both ILO and claimant count measures continue to be close to historical lows – although data for performance since quarter two confirms that both these measures of unemployment are increasing.

While the employment level has fallen from the high seen in Q2 2007, it remains relatively close to its highest level since 1992 (before which consistent records are unavailable). The employment rate in Scotland remains above that of the UK (76.4 per cent compared to 74.8 per cent). Since the start of 2008, there has been an increase in the level and rate for unemployment on both ILO and claimant count measures. The Scottish claimant count rate

rose to 3.0 per cent in September 2008, slightly above the UK claimant count rate. The outlook for the Scottish labour market in the medium-term remains robust, however we are uncertain as to the impact of continued, and deepened, economic uncertainty on labour market indicators. The service sector, particularly in financial services and ancillary business services, has been the engine of the recent growth in Scottish employment and any changes in these sectors may have damaging short-term consequences for the Scottish labour market.

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## Endnotes:

<sup>1</sup>The Census 2001-consistent population figures at local authority level were released in February 2003. This has allowed the production of interim regional LFS estimates. The population data only cover the periods up to mid-2001. The data presented here are taken mainly from Labour Market Statistics, May 2008 and are consistent with the updated LFS data available on NOMIS from Summer 2004. Labour Market Statistics continue to report data for Scotland at the quarterly level, so this will continue to form the basis of our analysis of movements in the labour market between quarters.

<sup>2</sup>The Labour Force Survey definition of ILO unemployment takes precedence over the claimant count measure. ILO unemployment is much less sensitive to changes in the regulations governing unemployment benefit, and conforms to a widely accepted standard to allow for more meaningful cross-country comparisons.

<sup>3</sup>Highly skilled jobs include sections 1-3 of the Standard Occupational Classification (SOC), covering "Managers and senior officials", "Professional Occupations" and "Associate Professional and Technical Occupations".

Grant Allan  
24 October 2008

**Table 1: Headline indicators for Scottish and UK labour market, Q2 2008**

			Change on quarter (%)	Change on year (%)	United Kingdom	Change on quarter (%)	Change on year (%)
April to June 2008		Scotland					
Employment*	Level (000s)	2,543	0.2	-0.5	29,558	-0.1	0.3
	Rate (%)	76.4	0.0	-0.7	74.8	-0.1	-0.3
Unemployment**	Level (000s)	113	-9.3	-7.5	1,672	3.7	0.9
	Rate (%)	4.2	-0.5	-0.3	5.4	0.2	0.0
Activity*	Level (000s)	2,655	-0.2	-0.8	31,151	0.4	1.2
	Rate (%)	79.9	-0.4	-0.9	79.1	0.0	0.3
Inactivity***	Level (000s)	644	2.3	5.2	7,876	0.0	-1.1
	Rate (%)	20.1	0.4	0.9	20.9	0.0	-0.3

**Source:** Labour Market Statistics (First Release), Scotland and UK, August 2008

\* Levels are for those aged 16+, while rates are for those of working age (16-59/64)

\*\* Levels and rates are for those aged 16+, rates are proportion of economically active.

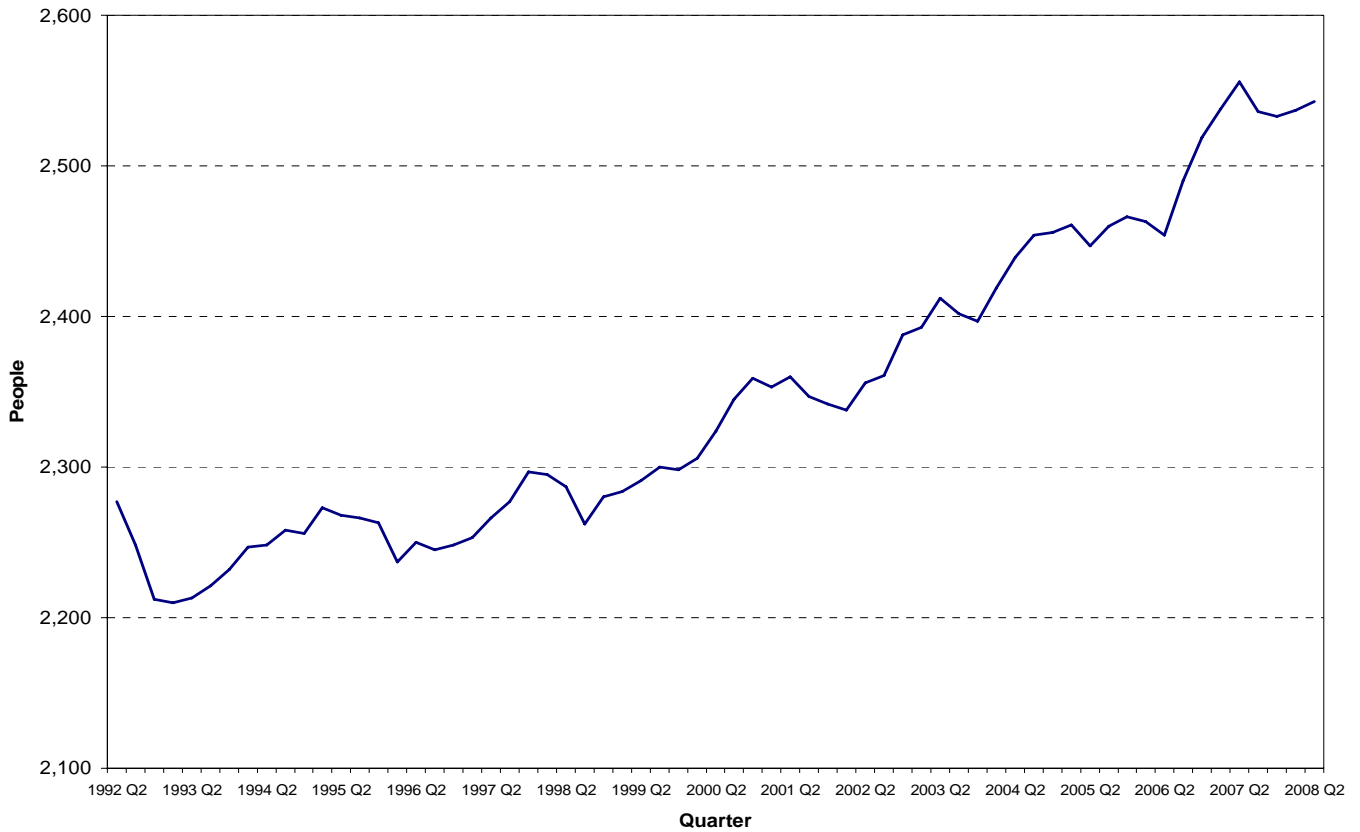
\*\*\* Levels and rates for those of working age (16-59/64)

**Table 2: Employee jobs by industry, Scotland, June 2008**

SIC 2003 Section	All jobs (seasonally adjusted)	All jobs A-O	Agriculture, Forestry and Fishing A,B	Mining Energy and Water Supplies Industries C,E	Manufacturing Industries D	Construction F	Distribution etc, transport etc, finance and business services H-K	Education, health, public admin and other services L-O
Jun 05	2,361	2,358	31	37	234	119	1,096	840
Jun 06	2,382	2,379	30	37	225	139	1,097	851
Jun 07	2,380	2,377	32	39	224	140	1,100	842
Sep 07	2,383	2,380	32	40	223	136	1,106	843
Dec 07	2,387	2,399	31	39	221	136	1,125	847
Mar 08	2,387	2,378	32	39	220	133	1,107	847
Jun 08	2,387	2,385	33	39	218	131	1,112	851

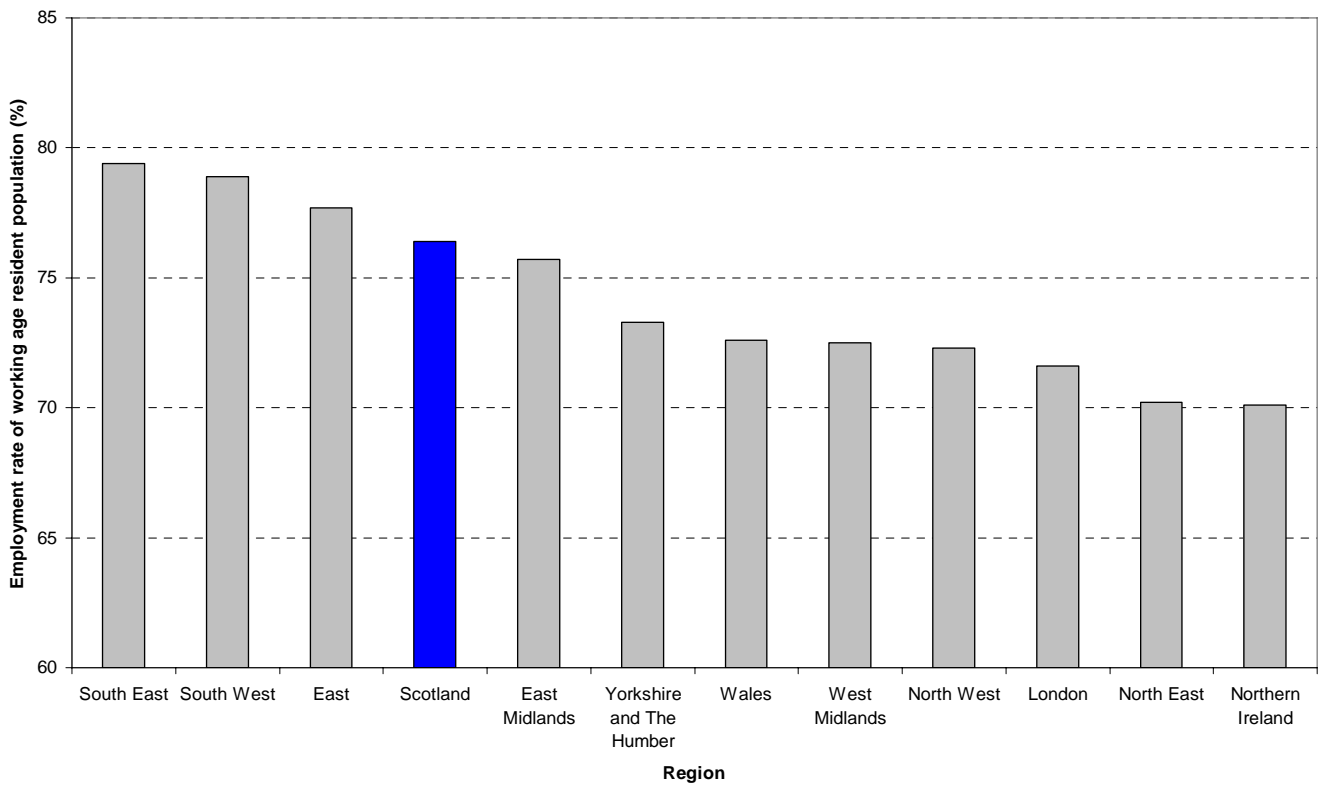
**Source:** Labour Market Statistics (First Release), Scotland, October 2008

**Figure 1: Total (16+) employment in Scotland, Q2 1992 to Q2 2008, seasonally adjusted**



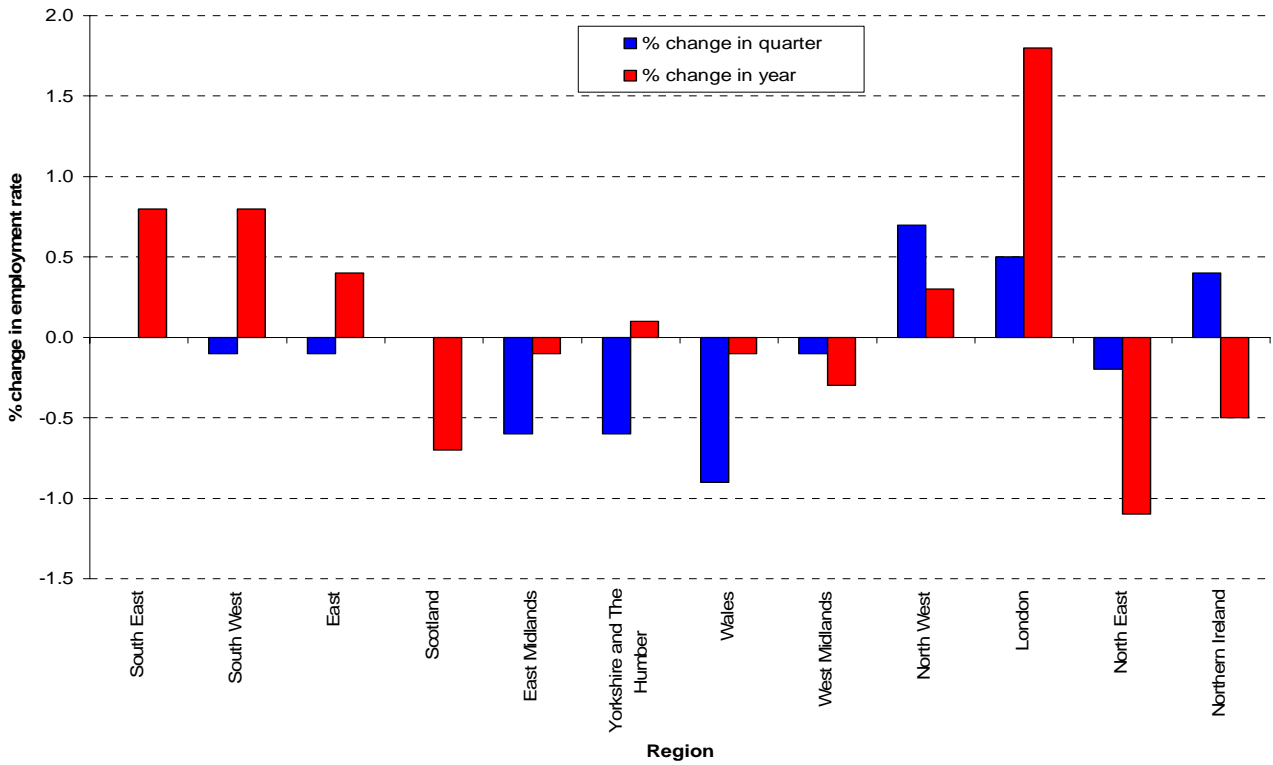
Source: Labour Force Survey, National Statistics

**Figure 2: Residence based employment rates for Scotland and other regions of UK, Q2 2008**



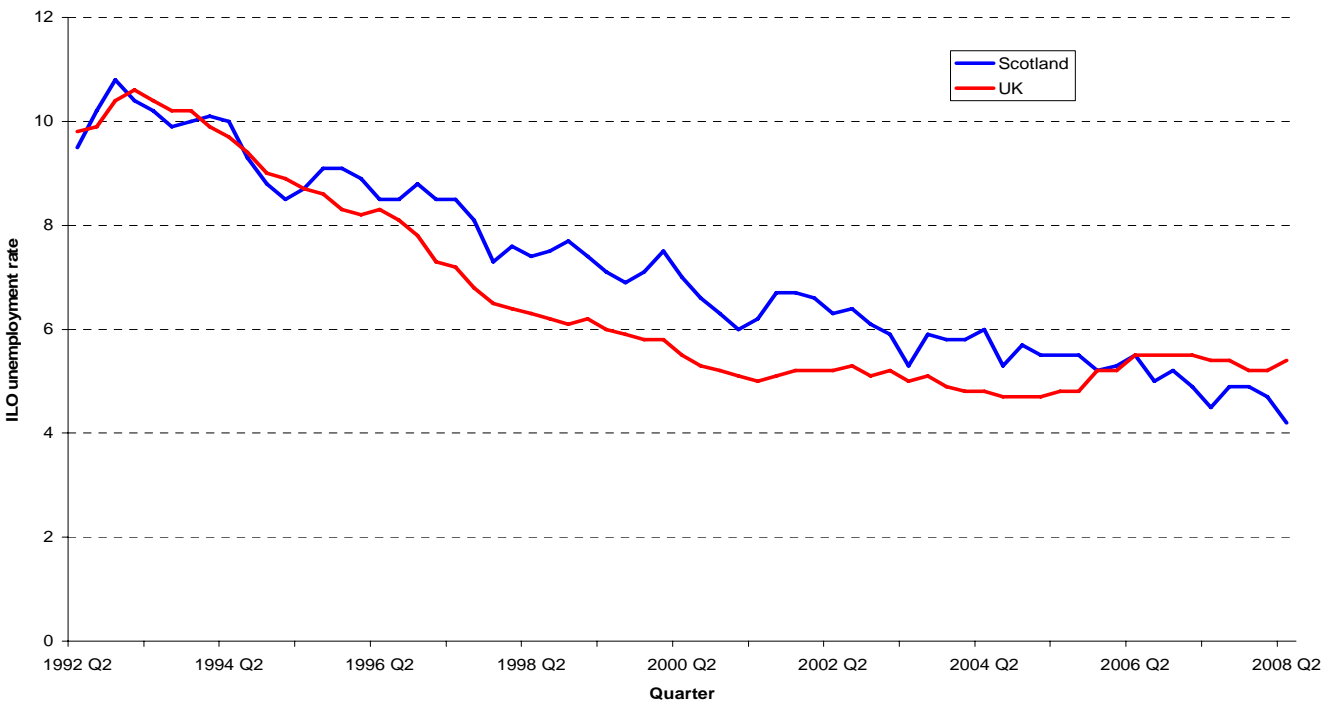
Source: Labour Force Survey, National Statistics

**Figure 3: Change in residence based employment rate for Scotland and other regions of the UK to Q2 2008**



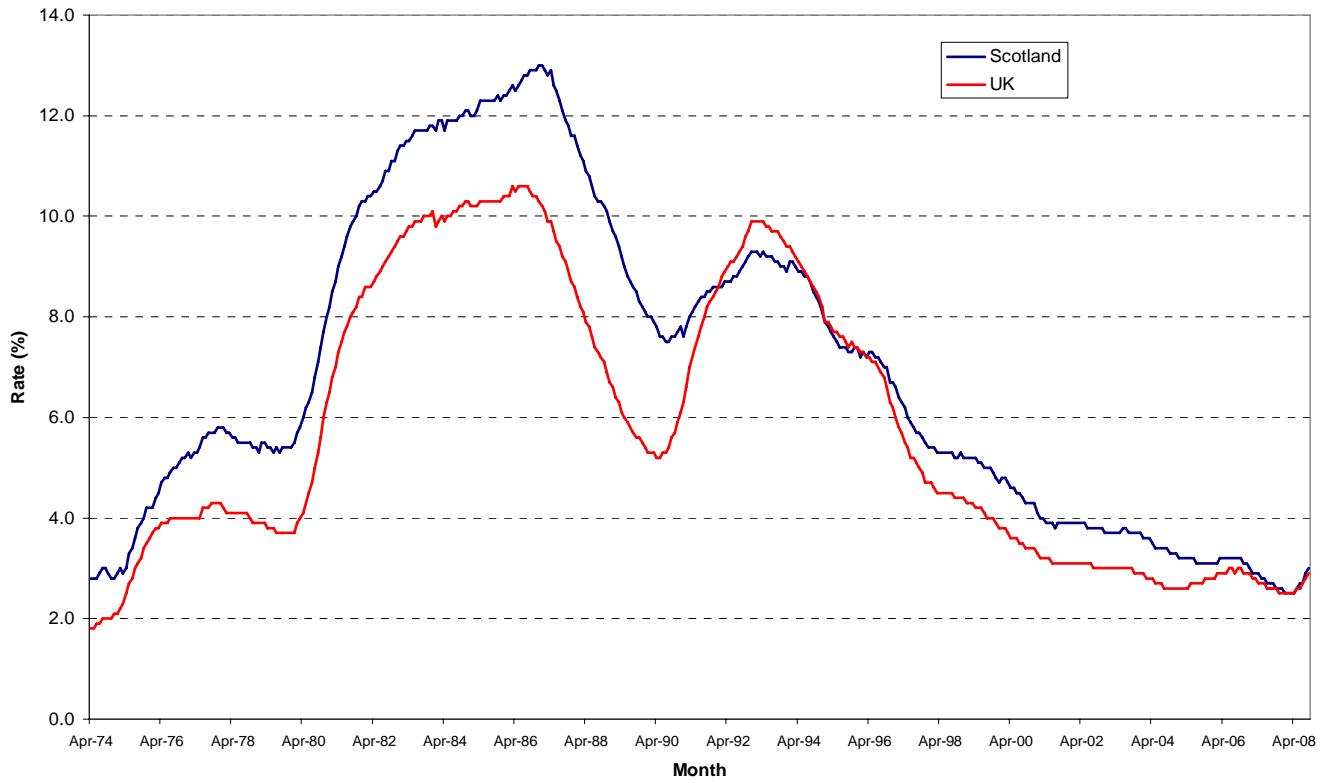
Source: Labour Force Survey, National Statistics

**Figure 4: Scotland and UK ILO unemployment rate, Q2 1992 to Q2 2008**



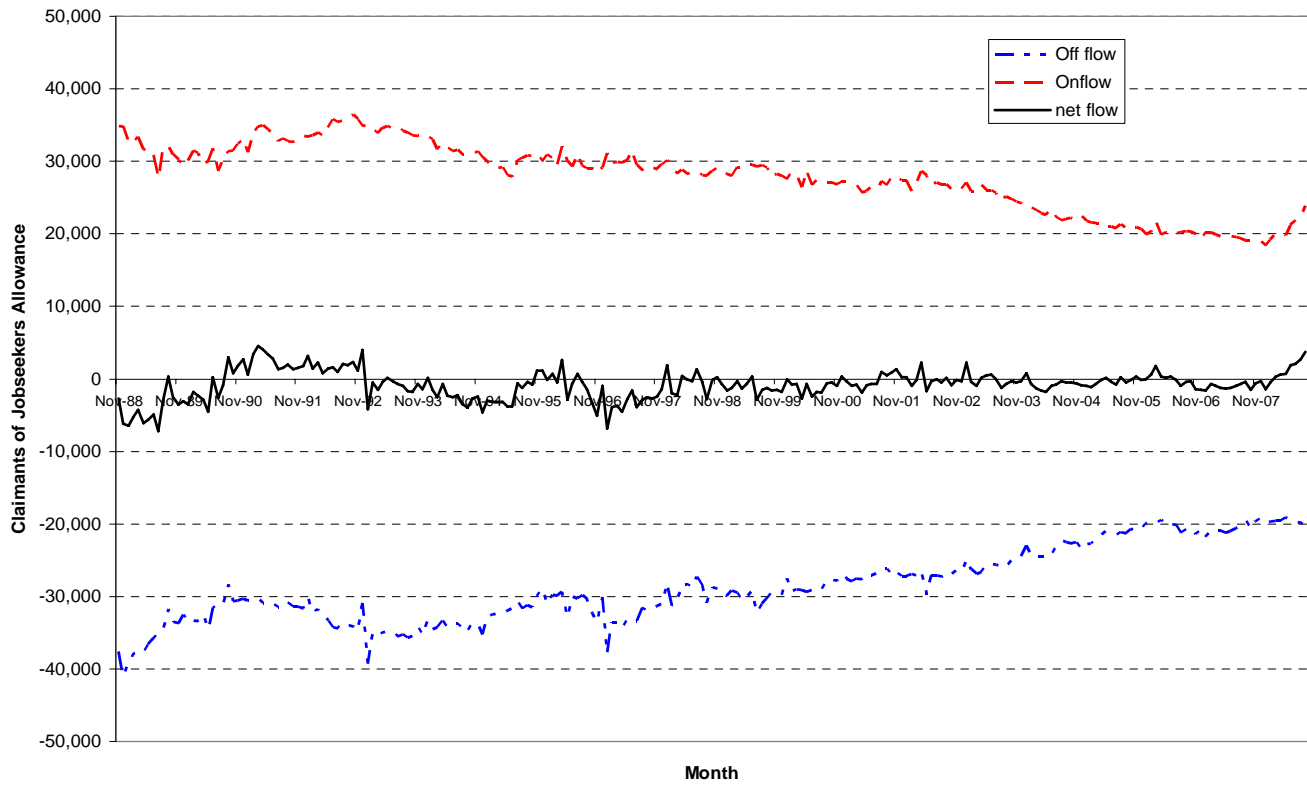
Source: Labour Force Survey, National Statistics

**Figure 5: Scotland and UK monthly Claimant Count rate, April 1974 to September 2008**



Source: National Statistics (accessed through Nomisweb)

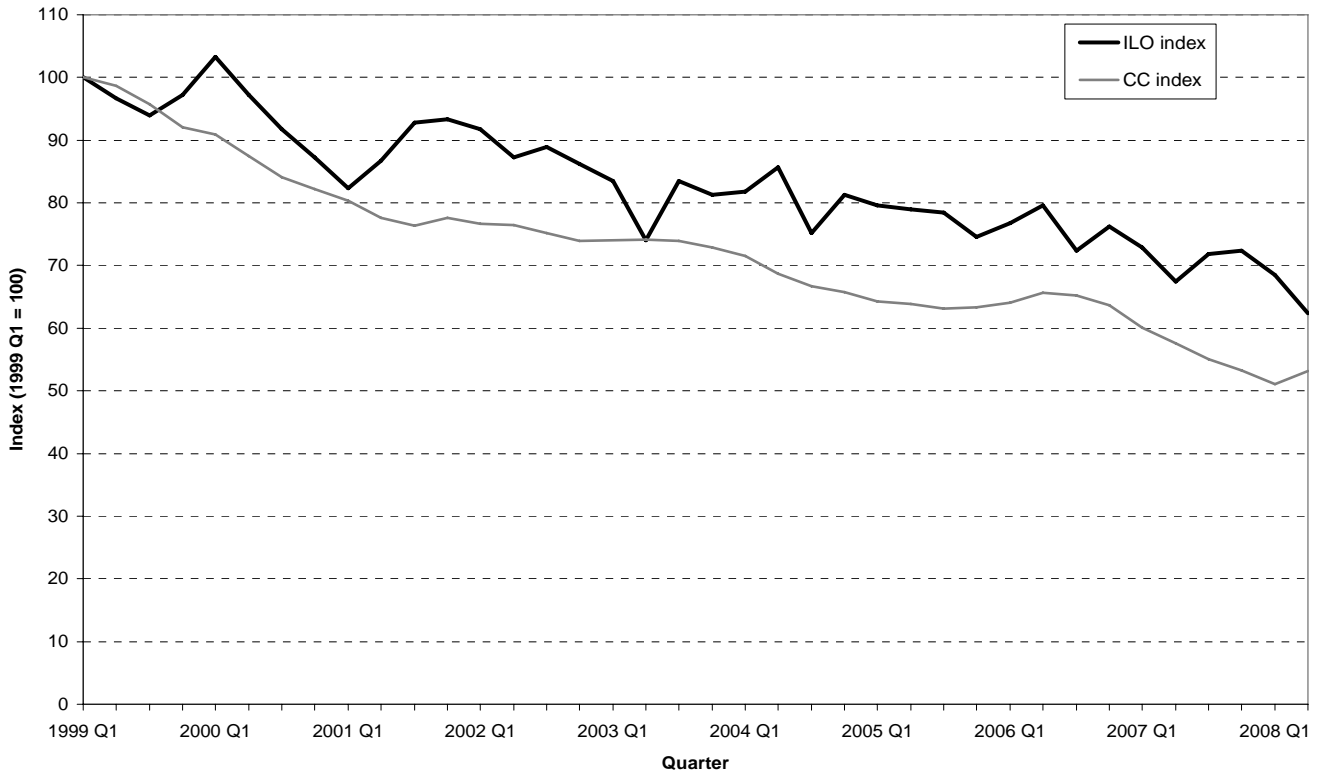
**Figure 6: Scotland inflows, outflows and net flows to Jobseekers allowance, November 1988 to September 2008**



Source: National Statistics (accessed through Nomisweb)

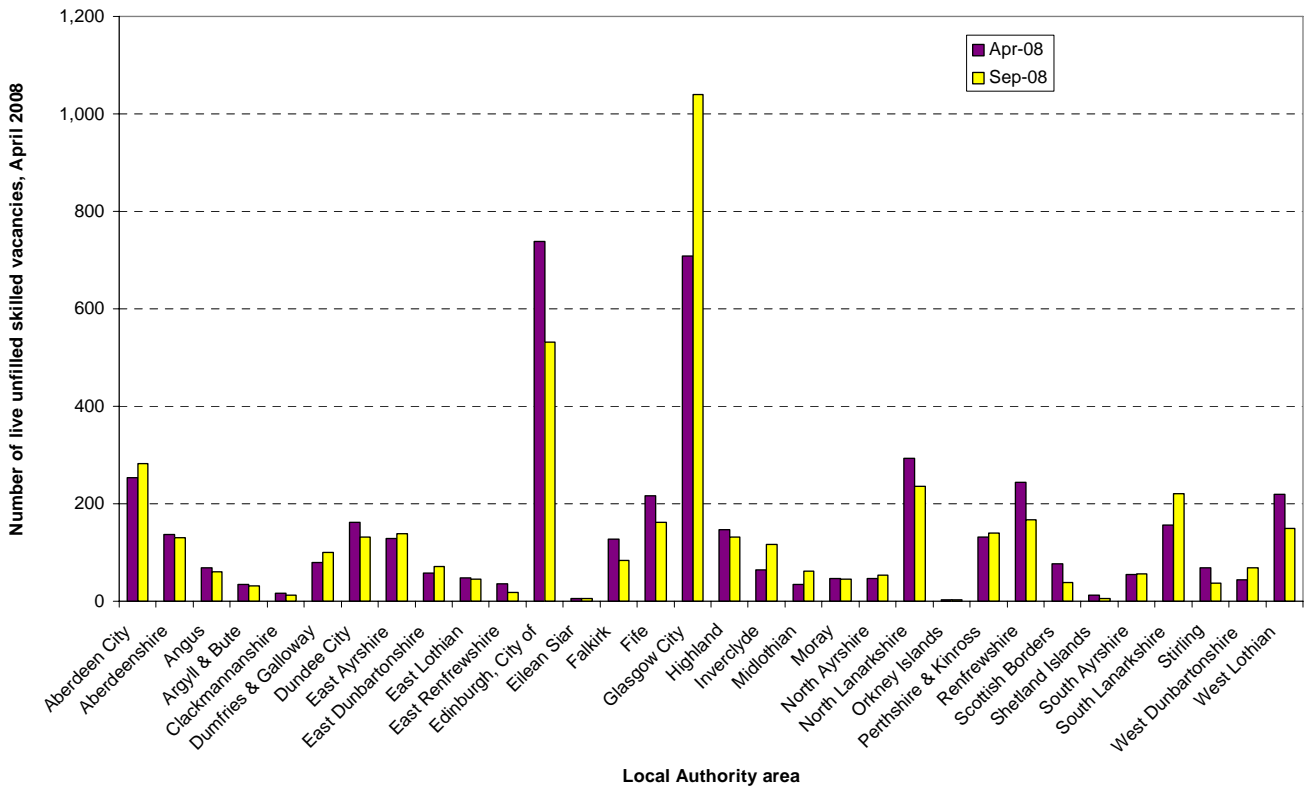


**Figure 7: ILO and claimant count unemployment in Scotland, Q1 1999 to Q2 2008, index Q1 1999 = 100**



Source: National Statistics (accessed through Nomisweb)

**Figure 8: Live unfilled vacancies for “skilled”<sup>3</sup> occupations in Scotland by local authority area, April 2008 and September 2008**



Source: National Statistics (accessed through Nomisweb)

# Economic perspectives

## How can we measure Scotland's footprint? (and, once we have, what do we do with it?)

by Karen Turner

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### Introduction

Recent months have seen a great deal of interest and consultation in Scotland regarding environmental and carbon accounting in general, and the calculation and use of ecological and carbon footprints in particular. Ecological footprints are concerned with the global impacts of our consumption decisions in terms of resource use (most commonly focussing on land use), while carbon footprints are concerned with the pollution side of the equation, carbon emissions around the world engendered by our consumption activities. Footprint measures are powerful pedagogic tools for raising interest in, and awareness of, ecological and sustainability issues, and have some valuable characteristics. The notion that consumption is the ultimate driving force behind resource use and pollution generation is a key ecological and economic perspective. Even if our focus is on national targets (for example, meeting UK Kyoto agreements on reducing greenhouse gas emissions), it is important to emphasise the fact that domestic production of goods and services requires a complex interaction between economic sectors, often scattered around the world. In footprint calculations, a large proportion of the resource use and/or pollution generation indirectly embedded in Scottish consumption will occur outwith the boundaries of Scotland (and/or the UK). On the other hand, a large proportion of resource use and pollution generation in Scotland will be driven by consumption decisions in other regions and nations. Thus, in tackling global sustainability problems at the regional or national level, we need examine resource use and pollution generation under what are referred to as 'consumption accounting principles' as well the 'production accounting principles' reflected in standard resource use or emissions inventories.<sup>1</sup>

**Opinions expressed in economic perspectives are those of the authors and not necessarily those of the Fraser of Allander Institute**

However, while footprint measures should, in principle, give us an indicator that captures resource use and/or pollution generation according to consumption accounting principles, this article argues that two important issues should be considered before further investment is made in constructing footprints for Scotland:

1. Can (ecological or carbon) footprints currently be calculated accurately for Scotland, and in a way that is comparable with measures for other regions/countries?
2. Even if we can make accurate and comparable footprint measures, would these be any more than contextual indicators that can be monitored, rather than measures of progress that can be influenced by policy and other human actions?

This article considers each of these questions in turn.

The need for transparency, analytical rigour, coverage and consistency in footprint measures, and the application of input-output accounting techniques

A crucial problem with past footprint measures (including, but not limited to, Best Foot Forward Ltd's 2004 ecological footprint analysis for Scotland) has been a lack of transparency, clarity and standardisation in the accounting methods used. Economic measures, such as GDP, are constructed using internationally agreed accounting techniques, and the methods recommended and used detailed in publicly available documents published by relevant statistical agencies. In contrast, accounting methods and data sources for footprint measures tend to have been somewhat opaque and incomplete in terms of coverage of consumption activities and supply chain activities, as well as being inconsistently calculated across different countries and regions. However, reflecting the growing policy, business and public interest in footprint calculations, there have recently been developments in the academic literature to develop standardised techniques using a basic accounting approach that is both transparent and analytically rigorous. This approach is standard input-output analysis applied in a multi-region or country context.

Input-output (hereafter IO) analysis is based around a set of sectorally disaggregated economic accounts (such as those published for Scotland by the Scottish Government on an annual basis). In these accounts, the inputs to each industrial sector, and the subsequent uses of the output for those sectors (by other local sectors and different types of internal and external consumers), are separately identified. The primary function of IO analysis is to quantify the interdependence of sectors within the economy: that is, the extent to which the output of one sector is used as intermediate inputs in the production of other sectors. For example, imagine that electricity is used in the production of plastics, which are then used as an intermediate input in the production of cars, which are subsequently sold to local

consumers. IO provides useful mathematical routines to track this energy (and all other direct and indirect intermediate) use embodied within local consumption and other elements of final demand.

IO therefore provides an ideal framework for economic-environmental accounting. If the economic information in the standard economic IO accounts can be augmented with environmental information relating pollution generation and/or resource use to direct production and consumption activity, the formidable analytical tools associated with IO can be utilised. This was first recognised by Leontief (1970), but has been picked up more recently in numerous academic studies that have attempted to develop on Wackernagel and Rees's (1996, 1997) initial ecological footprint concept using IO accounting techniques (see Wiedmann et al, 2007, for a comprehensive review). As explained by Turner et al. (2007a) this would seem a natural development, given that the focus of ecological and/or carbon footprints is to capture the total (direct plus indirect) resource use and/or carbon generation embodied in final consumption in an economy: this is exactly what standard IO 'multiplier' analysis does. Building on earlier work by Munksgaard and Pedersen (2001), Turner et al. (2007a) go on to derive a multi-region input-output method that is appropriate for accounting for emissions and/or resource use under the production and consumption accounting principles (and also determining environmental trade balances as the difference between the two, equating to the differences between resource use and/or emissions embodied in imports and exports to/from the target region).

However, while the multi-region input-output approach to accounting for emissions generation within countries and emissions embodied in trade flows seems to have become accepted in the academic community, it has not yet become common-place in the wider policy and consulting arena. This is most likely in part due to issues of data availability, as a full footprint calculation requires:

1. Domestic input-output accounts reported in an appropriate 'analytical' format (symmetric industry-by-industry or commodity-by-commodity matrices reported in basic, producer prices);
2. Physical pollution and/or resource use coefficients for each sector and consumer, to give a set of environmental IO accounts (with guidance in the form of the Eurostat NAMEA<sup>2</sup> format initiated by Haan, 2001, and applied to the UK by Vaze, 1999);
3. 1 and 2 for each direct or indirect trading partner Interregional and
4. international trade flow data in corresponding IO format.

Other issues that are likely to have so far constrained the application of IO methods for footprint calculations are a lack of policy case studies and the relatively recent nature of developments in the academic literature, as well as the need for non-technical translation and focussed dissemination of these developments.

However, in the case of Scotland, the policy, research, consulting and business communities have recently begun to put a great deal of effort into addressing these issues, particularly in the context of carbon accounting. In large part initiated by the work of the Scottish Government's Steering Group on Additional Measures of Progress<sup>3</sup> and by the recently formed Scottish Carbon Counting Group, a number of open seminars and workshops have been held in Scotland in 2008, with representation from all four broad communities list above, to discuss appropriate accounting techniques and their practical applicability. Particular focus was given to input-output techniques in a workshop sponsored by the Scottish Environment Protection Agency, SEPA) to inform the activities of the Scottish Government's Steering Group on Additional Measures of Progress.<sup>4</sup> This workshop was run by the author of this paper, and included a presentation by Professor Max Munday from the Welsh Economic Research Unit and ESRC-sponsored BRASS centre in Cardiff, who has been involved in similar consultation and developments with regard to economic-environmental accounting and footprint measures in Wales (see Jones et al, 2006, and Munday and Roberts, 2006). A report on this workshop (Turner, 2008) is available from the author on request<sup>5</sup>, but a key outcome was a broad consensus on the following points:

- “While the development of the IO framework is resource-intensive, if we have faith in market-based solutions to the problem of climate change, we absolutely need to adopt an IO approach.
- Uses of an environmental IO approach are not limited to footprint calculations. It would facilitate the construction of a wide range of environmental indicators. Therefore, it is likely to represent ‘good value for money’ to policymakers.
- IO analysis would allow us to develop a better understanding of domestic and direct emissions generation as well as the indirect effects that can be measured through multiplier analysis”.

Turner (2008b, pp.5-6)

At the UK level in particular, there have also been developments in terms of more policy-orientated cases studies, with key proponents of the IO approach to footprint calculations in the consulting community being the Stockholm Environment Institute (SEI), and with crucial interaction on the academic side by the ESRC-sponsored RESOLVE unit at the University of Surrey (see, for example, Druckman et al, 2008). However, a crucial problem in the UK context, despite early developments in

the practical application of environmental IO analysis originating with ONS (Vaze, 1997), is the fact that the last set of UK IO tables in the appropriate ‘analytical’ format for multiplier analyses such as footprint calculations were constructed for 1995.

Given that the economic and environmental positions of Scotland are clearly closely interrelated with those of other regions in the UK, and the UK national economy in general, the absence of appropriate UK IO data is a serious impediment to accurate carbon accounting for Scotland. However, Scotland has a very strong foundation of its own in terms of IO accounting. The Scottish IO team, based within the Office of the Chief Economic Adviser, produces economic IO accounts in analytical format on an annual basis, and consults regularly on potential developments of this basic framework through its Input-Output Expert User Group. Experimental interregional and international trade flow data (item 4 above), reporting Scotland's imports from both the rest of the UK and the rest of the world broken down by commodity have been produced (and used in limited pilot applications of the multi-region IO framework by Ferguson et al (2004) and McGregor et al (2004, 2008). Moreover, the Scottish Government has supported exploratory work into the extension of the Scottish IO framework to environmental applications for a number of years. For example, between 2001 and 2004, the (then) Scottish Executive ran a Scottish Environmental Accounts Working Group, a key output of which was a pilot sectoral CO<sub>2</sub> account in IO/NAMEA format (see Turner, 2003). More recently, following the SEPA-sponsored workshop reported in Turner (2008), the Scottish Government's Steering Group on Additional Measures of Progress has made recommendations to consider the formal development of an environmental IO framework for Scotland. In addition, through its participation in Economic and Social Research Council's (ESRC) collaborative governmental studentship programme, the Scottish Government is co-funding a studentship titled 'The Use of Carbon Accounting in Scotland: Consumption and Production Based Measures of Carbon Emissions', due to begin in 2009, which will involve using IO analysis to produce a number of policy case studies applying the production and consumption accounting principles (where footprints fall under the latter). This brings us to our next question:

### **What could we do with a Scottish environmental IO framework?**

As noted above, among the conclusions of the SEPA-sponsored workshop the potential uses of an environmental IO approach are not limited to footprint calculations, and would facilitate the construction of a wide range of environmental indicators. Munksgaard and Pedersen (2001) demonstrate how emissions and/or resource use can be accounted for under the production and consumption accounting principles using the same IO framework, and corresponding environmental ‘trade balances’ between any one region/country and the rest of

the world derived. Applying the multi-region IO method detailed in Turner et al (2007b), McGregor et al (2008) demonstrate the corresponding calculation of environmental trade balances between any two regions or countries (with an illustrative analysis for Scotland and the rest of the UK), and how a combination of accounting principles can also be applied. For example, they apply the consumption accounting principle to trade flows between Scotland and the rest of the UK, but the production accounting principle at the national, UK, level (to reflect concern with domestic emissions generation under the Kyoto Protocol). An objective of the aforementioned ESRC/Scottish Government collaborative studentship will be to develop this analysis, hopefully aided by the availability of more robust regional and interregional environmental IO data, and drawing on (and perhaps collaborating in) developments made by other teams in the UK, such as the RESOLVE team at Surrey, and internationally (for example, colleagues at the Institute for Sustainability Analysis in Sydney are currently engaged in developing an international multi-region environmental IO framework).

However, in order for Scotland to move forward, and even become one of the world leaders in environmental accounting, including calculation of footprints, it is crucial to lay a solid foundation in terms of developing an appropriate economic-environmental accounting framework. At present economic and environmental data for Scotland are largely reported separately. If we think economic activity is the root cause of most environmental problems, we need to link and integrate economic and environmental accounts. In presenting a pilot NAMEA framework for Scotland, Turner (2003) notes that there are two broad issues in terms of data requirements that must be considered before a sectorally disaggregated economic-environmental database can be reported, and “[T]hese are:

1. The availability of region-specific data for Scotland on sources and generation of emissions.
2. Even if region-specific emissions data of an acceptable quality are available, there is the question of whether these can be reported for a sectoral breakdown that is consistent the Standard Industrial Classification (SIC) used in the economic accounts. If policy is orientated towards influencing activity in economic sectors, clearly there are benefits to environmental data being presented in a format that is consistent with existing economic accounts.”

Turner (2003, p.44)

Of course, IO accounting is resource intensive and, therefore, further consultation is required in order to identify how the greatest value-added can be achieved in terms of current policy concerns and objectives within the constraints of the availability and resource implications of appropriate input-output data. However, investment in an

appropriate information infrastructure (for a range of economic-environmental accounting measures, not limited to footprints) would seem to be a more sensible priority than further expenditure footprint measures, the accuracy and consequent usefulness of which will be negatively affected by the absence of accurate data describing the economic-environmental relationships that drive our footprint.

### **If we do develop accurate footprint measures for Scotland, what can we do with them?**

A second question was raised at the start of this article. This was, even if we can make accurate and comparable footprint measures, would these be any more than contextual indicators that can be monitored, rather than measures of progress that can be influenced by policy and other human actions? A related question is the regularity of reporting. Presumably, we do not want to measure our footprint (be it carbon or ecological) once, and leave it at that. As Professor Munday argued at the recent SEPA-sponsored workshop (see Turner, 2008), that if government chooses to develop a footprint measure (or measures if both ecological and carbon footprints are required), this will involve a commitment to estimate the selected indicator at regular intervals in order to monitor our progress in terms of (hopefully) reducing its value, and to do so using consistent methodology.

However, a key problem with a footprint measure, even if it is calculated using the type of transparent, rigorous and consistent/comparable method facilitated by adopting an IO approach, is that is just an indicator. If the value of our indicator changes between one year and the next, why did it change? If its value is determined by economic decision-making (e.g. what we consume, the technology we use), can we take action to change it? That is, can we reduce our footprint? This seems to be the key objective underlying measurement of footprints. However, in order to understand why our footprint changes over time, we need to be able to identify policy levers and causal relationships within the economic system, and between economic and environmental factors. That, is we need to have knowledge of the transmission mechanism between changes in behaviour (which may be induced by policy actions or other factors) and the value of different variables that contribute to our footprint.

The argument for adopting IO techniques to measure indicators such as footprints is that the associated multiplier analysis is a powerful accounting tool for examining the structure of economic activity and associated issues such as the pollution and/or resource use engendered or embodied, directly or indirectly, in production, consumption and trade flows. However, in terms of modelling the impacts of actual or potential changes in policy or other conditions, IO is limited. Where concern lies in analysing the impacts of changes in policy, or other disturbances, on variables of interest, such as environmental trade balances, a more flexible modelling

framework is required. We require a modelling framework that will allow consideration of changes in behaviour on both the supply- and demand-sides of the economy, for example in response to changes in prices. Such a modelling framework<sup>6</sup> would use the IO accounting framework as a database, and, thus, shares its strengths, but introduce more flexible, theory-consistent and realistic representations of economic behaviour and relationships.

However, again, developments are already underway in this respect for Scotland. In October 2008, the author's team at the Department of Economics and University of Strathclyde in Glasgow began work on a project under the ESRC Climate Change Leadership Fellowship programme. This involves building on the type of IO accounting framework outlined above to develop a modelling framework that will contribute to ability of policymakers to fully assess the impacts of alternative policy options on the fulfilment of regional and national targets for reductions in greenhouse gas emissions. It will also incorporate measurement of a range of consumption and production based indicators. This work will involve collaboration with other researchers in a range of fields (including engineers, environmental scientists, economists and other regional scientists) and from a number of different countries (including the UK, US and Australia) and focus on different target economies. However, a basic interregional UK model has already been constructed (see Gilmartin et al, 2008), and will be developed throughout the project, though the quality of this development will clearly depend on the extent to which investment is made by the Scottish Government and ONS in the IO accounting framework outlined and recommended above.

## Conclusion

This article has raised questions regarding the accurate and useful calculation of ecological and/or carbon footprints for Scotland. However, it is clear that a number of developments are already underway in Scotland to enhance our analytical capacity in terms of accounting for the environmental impacts of our behaviour and how we may improve our performance. Nonetheless, it is crucial that we continue to direct our efforts, and our public resources, in ways that will ultimately yield the most benefits. The core argument put forward here is that we must continue to invest in the informational and analytical infrastructure, even if this means delaying actual measurement of indicators such as ecological or carbon footprints. Ultimately, these are only useful to us if they are based on good data and sound measurement techniques.

Author note: It is important that the ESRC Climate Change Leadership Fellowship project outlined above will also take account of stakeholder needs in terms of both accounting and modelling work. Formally, this will be done through a series of open seminars and workshops, the first of which will be held in March 2009, and through a project web-site to be set up by the end of the year. Please contact

karen.turner@strath.ac.uk if you would like to participate in any seminars or workshops and/or be placed on the mailing list to receive project updates via newsletters and non-technical papers. Informal contact is also most welcome.

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## Endnotes

<sup>1</sup> The terminology of consumption and production accounting principles originated with Munksgaard and Pedersen (2001).

<sup>2</sup> NAMEA is an acronym for National Accounting Matrix including Environmental Accounts, which adopts an IO structure, though not necessarily in the analytical format required for the type of multiplier analysis used in footprint calculations.

<sup>3</sup> The Scottish Government convened the Steering Group on Additional Measures of Progress in 2006; it reported to Scottish ministers in the summer of 2008.

<sup>4</sup> The purpose of the SEPA-sponsored workshop was to investigate issues relating footprint calculations raised by in a collaborative paper (Turner et al, 2007b) produced by the Scottish Government and Fraser of Allander Institute to inform the Steering Group on Additional Measures of Progress regarding the issues associated with different composite measures of sustainability.

<sup>5</sup> Contact karen.turner@strath.ac.uk

<sup>6</sup> Referred to as a computable general equilibrium (CGE) modelling framework.

# The Trump development in Aberdeenshire: what are the issues?

Stewart Dunlop, Fraser of Allander Institute

## Introduction and background

The development company set up by Donald Trump, Trump International Golf Links Scotland (TIGLS), set out plans in 2007 to create a high-quality golf, hotel and housing development at the Menie Estate in Aberdeenshire. The key facilities involved in the development are:

- 2 championship quality golf courses, capable of hosting major tournaments
- A golf clubhouse
- A short game area/driving range
- A golf academy
- A 5-star, 450 room hotel
- A conference area
- Spa
- 36 Golf Villas
- 950 Holiday Homes
- 500 Private Residential Houses
- Staff accommodation

The original planning application for Menie was controversially rejected by Aberdeenshire Council<sup>1</sup>, one main reason being that the TIGLS proposal involved the use of a Site of Special Scientific Interest (SSSI, see below)<sup>2</sup>. Since then, the development process has continued with the setting up of a public enquiry into the Trump plans. The enquiry, which sat in June this year and is expected to report in the autumn, gave all sides an opportunity to publicly air their views on the issues surrounding the Menie proposal. While the reporters' decision will concern only whether this specific development should be allowed to proceed or not, it is interesting to consider the issues raised at the enquiry within a wider context - in particular, the Trump enquiry illustrates, more than any other issue seen in Scotland in recent years, the wider question of how to weigh the economic benefits that such developments can bring against any environmental costs that might ensue. This article attempts to examine the economic and environmental views forwarded during the enquiry and to assess how, in practice, decisions should be made in

situations where conflicts of this nature occur. Attention will also be directed to whether any guidance is available from environmental documents published by the Scottish Government.

## Economic benefits

From a local economic viewpoint, the proposed Menie development is significant in two ways. The first is simply the size of the investment planned at Menie. The second, discussed further below, relate to how it might impact on certain longer term economic issues in the North East.

Firstly, an assessment of the economic benefits of TIGLS plans for Menie<sup>3</sup> shows that the project is expected to create a substantial amount of employment and make a significant contribution to Gross Value Added<sup>4</sup> (GVA), both across Scotland and in the surrounding local economy<sup>5</sup>. Assessments were made of two aspects of the proposed development, the economic activity created during the construction phase and the more long-lasting employment and GVA created once the ranges of facilities outlined above are operational.

## Construction impact

Construction impacts are of course short term but, given that the proposed facilities are estimated to cost around £720 million, they clearly will provide a significant boost to construction demand - estimates suggest that the net employment created across Scotland by the construction at Menie will be between 4,694 - 7,042 Full Time Equivalent (FTE) jobs<sup>6</sup>.

The spread of the employment estimates (the upper and lower estimates differ by 2,348 FTE jobs) reflect uncertainty about the extent to which the Trump development may displace other activity (i.e., may take market share from firms in the construction sector). Uncertainty regarding this was taken account of by adopting two different assumptions regarding displacement (both of which were quite high, the argument being that adopting a conservative assumption reduced the risk of overstating the economic impacts attributable to the project). Using English Partnerships guidance<sup>7</sup>, displacement was assumed to be either 25% or 50% - the first assumption causes the net activity created to be reduced by 25% while the 50% assumption assumes that construction activity elsewhere in Scotland will fall by 50%.

The estimates also made some allowance for leakage (assumed to be 20%) because some of the jobs created at Menie may be taken up by residents from outwith the area. Finally, no allowance was made for additionality. Additionality is generally measured within the context of government policy interventions in the economy, and attempts to measure the net impact of such interventions. However, as no policy support is proposed for the Menie development, any activity created is thus wholly additional - the assumption is that the activity estimated for the Menie



development would not be generated if TIGLS does not invest the money required to create the facilities at Menie.

GVA estimates were also produced on the same basis as above (25% and 50% displacement, 20% leakage and 100% additionality) and, on these assumptions, the construction of the Menie development was estimated to create an additional amount of GVA of £400 million (25% displacement) and £267 million (50% displacement).

Locally, construction of the facilities at Menie was estimated to create between 2,165 and 1,443 FTE jobs and between £120.7 million and £80.5 million worth of additional GVA.

### Operating impact

As noted, the construction impacts outlined above are short-term, since they will be created only during the period that the development is being constructed. In contrast, the operational impacts are ongoing and represent annual estimates of the extent to which the Trump development will add to activity, both in Scotland and locally, as long as the Menie development continues to operate. These estimates show how the development is locally significant, in terms both of its size and its longer term effect on activity in the North-East economy.

Using a similar set of assumptions to those outlined above, it was estimated that the development would create between 1,856 – 1,237 FTE jobs and between £49.2 – £32.8 million worth of GVA in Scotland. In the North-East (Aberdeenshire/Aberdeen City), the Menie development was estimated to create 1,418-945 FTE jobs in and between £33.5 million (25% displacement) and £22.3 million worth of GVA (50% displacement).

### The structural impact on the local economy

Also significant, however, is that the Menie development may help to address what local policymakers recognise as one of the key threats to the North-East economy, the projected decline in activity and employment in the oil industry. Oil and gas production from the North Sea has fallen considerably in recent years - the Royal Bank of Scotland Oil and Gas Index records that the amount of oil extracted from the North Sea has fallen continuously, from 28.9 million barrels per day (bpd) in 1999 to 15.6 bpd in 2007, a fall of just over 46%. While recent increases in oil prices may prolong the life of the local industry to some extent, it is clear that oil extraction cannot in the long-term continue to act as a major local economic driver. The potential employment decline has been well-recognised by local agencies with, for example, North East Scotland Economic Research predicting a fall in oil and gas employment from 39,000 (2006) to around 25,000 by 2021<sup>8</sup>.

Several local policymakers emphasised to the Trump enquiry the consequent need to diversify the North East economy in order to attract jobs to replace those that will

go as oil and gas declines. They argued that the Menie development could make a significant contribution to this process, particularly as the tourist aspect of the Menie development fitted closely with the area's agreed development strategy. For example, Councillor Anne Robertson, the leader of Aberdeenshire Council, referred to a Council policy document<sup>9</sup> which identifies one council objective as being to acquire a world class reputation for recreational tourism by 2011. She argued that the Menie development will enhance the areas reputation globally by providing Aberdeenshire with a world class tourist facility. Aberdeen and Grampian Chamber of Commerce argued that peripherality had meant that Aberdeenshire had always struggled with what it could offer in terms of tourism, and that the areas relative lack of world-class tourist attractions had hitherto been a barrier to developing local tourism<sup>10</sup>. While the size of the Menie development is significant in itself, local policymakers also made plain in their statements to the enquiry that the type of development involved was equally important, particularly in terms of the local diversification strategy.

As to whether developing tourism might represent a policy of "backing winners", recent figures appear to confirm that it may be so. Tourism activity in Scotland has grown substantially in recent years, and Scotland has also outperformed the UK in this respect. Scottish Government figures<sup>11</sup> shows that the number of employees in tourism grew by 19.1% between 1998-2005, and the proportion of all UK tourism turnover accounted for by Scottish tourism increased from 6.6% to 7.7% over the same period. Local feelings surrounding the appeal of tourism also appear to chime with the Scottish Government's plan to increase the number of tourists visiting Scotland. In "Scottish Tourism-the Next Decade"<sup>12</sup> the Government points out that global growth in tourism is expected to be between to 4-5%, and Visit Scotland has made encouraging golf tourism a primary focus of marketing activities.

### Environmental issues

While the proposed Trump development therefore promises substantial economic benefits for the local area and also appears to be highly consistent with the perceived future strategic needs of the North-East economy, the enquiry also addressed potential environmental losses, argued to be both nationally and locally significant. What were the views of those environmentalists who argued against the development?

The key objection advanced by, among others, the Royal Society for the Protection of Birds (RSPB), was the potential for the Menie development to adversely affect the area's natural heritage. Their argument principally concerned the importance of the landforms and habitats within the site, which includes two of the largest mobile sand dune systems in NW Europe, one of which is designated as a Site of Special Scientific Interest. The RSPB also pointed to the dune habitats, which it argued were "outstanding" and which sustained many of animal

and plant communities of high biodiversity value. It's overall argument concerned the need to preserve the whole ecological community, that is the sum total of the species and their supporting habitat, arguing that this was rare in a Scottish, UK and European context and was of high scientific value. The RSPB's evidence can best be summed up in the question they posed to the enquiry:

"We should ask ourselves whether serious environmental damage and disruption to natural processes is a necessary and inevitable sacrifice to be paid to achieve perceived economic benefits"

What is probably the key point is that part of the development area is designated as an SSSI. An SSSI is an officially designated area<sup>13</sup> (under the Nature Conservation (Scotland) Act 2004) and an SSSI designation aims to protect "the best of Scotland's natural heritage"<sup>14</sup>. SNH's main concern over the Menie development was that the stabilisation work required on the dunes in order to develop the golf course would so compromise the natural integrity and scientific value of the site that this could result in the SSSI designation being withdrawn.

The local council also recognises the importance of SSSI's. The Aberdeenshire Local Plan argues that SSSI's "are a very valuable resource, and therefore need protection against damaging development". Furthermore, the local plan also states explicitly that where a development will adversely impact on an SSSI, it will:

"Be refused unless the developer proves that any significant adverse effects on the quality for which the area has been designated are clearly outweighed by social and economic benefits of national importance"<sup>15</sup>.

The SSSI issue reflects the key problem facing the reporters to the Menie Enquiry. This is well expressed in the quotation from the RSPB submission above, and can be summed up whether the economic benefits that would undoubtedly result from the Trump development outweigh the environmental cost of the loss of a natural asset? The Menie dunes have been designated as an SSSI because, in the opinion of the official designating body representing the interests of the Scottish population, they are argued to be a unique part of Scotland's natural heritage. The proposed development would necessarily mean damage to an important natural asset, a point conceded by the developers, who accepted that it would result in "significant adverse effects on the environment" but argued that these would be outweighed by the economic benefits that the development would bring.<sup>16</sup>

### The source of the conflict

SNH also noted that it was the decision by TIGLS to develop on the SSSI "which triggers the obvious conflict between Mr Trump's ambitions and the protection of the

environment in respect of which SNH has a responsibility".<sup>17</sup> The enquiry was made aware of alternative designs that did not use the SSSI, but the key source of conflict remained that, in the opinion of the golf course architect,<sup>18</sup> it was necessary to use the SSSI part of the Menie site - failure to do so would mean that the development could not realise the key objective, which is to create "a world-class, championship links course, in traditional Scottish style, capable of one day hosting a major championship"<sup>19</sup>. In its final submission, TIGLS reiterated that creating the world class golf course that it envisioned required the SSSI land and that it would prefer to withdraw the application if this were not allowed.<sup>20</sup>

### Can we learn anything from policy documents?

Given that there is inevitably a conflict between the economic benefits and environmental costs of the proposed Menie development, it would be interesting to learn whether official policy documents contain any advice on how to proceed in the face of such conflicts. Unfortunately, this appears not to be the case. For example, the most recent official Scottish Government document on sustainable development<sup>21</sup> contains a good deal of material on the quality of Scotland's natural assets. For example:

"Scotland is blessed with some of the world's most precious and special natural environments ..... One of our key priorities must be to protect those natural resources for the long term and strengthen their role as part of our lives and culture"<sup>22</sup>

Similarly, the imaginatively titled document that outlines Scotland's marine and coastal strategy<sup>23</sup> argues that "the marine and coastal environments around Scotland are vitally important to the sustainable future of our country". Unfortunately however, neither document outlines the appropriate action to take in situations where the desire to conserve natural resources is in direct conflict with the possibility of a substantial economic gain.

### How should we make the decision?

It does appear that the reporters have a difficult decision to make. On the one hand there will be a substantial economic gain from a project that fits closely with long term local development needs. On the other, this will inevitably lead to the loss of a natural asset, one which the official heritage body considers to be a part of the best of Scotland's natural heritage. How should one be weighed against the other?

Clearly, the decision should be made by comparing the benefits that result from the development against the costs that will ensue. We do have a considerable amount of evidence on what the development means to the Scottish and local economies - the amount of GVA produced by the development measures the economic value created, and

so measures what it is “worth”, both across Scotland and locally. However, no comparable estimate was available about the value of the dunes. Since we have no evidence on how people value the natural asset, we have no common standard against which to compare costs and benefits.

This situation is unfortunate, especially as there are well-known economic techniques, chief among which is Contingent Valuation (CV), that are able to measure the value to society of natural resources. CV has the added benefit that it estimates a monetary value for the natural asset, and so produces a common standard of comparison between the economic and environmental consequences of a project.

### Contingent valuation

Contingent valuation measures the public’s valuation of a natural resource asset. In general terms, the economic value to society of any good or service is measured by what people are prepared to pay for it. If, for example, someone is prepared to pay £1 for a bus journey or £30 for a meal, then what the person is prepared to pay measures the value that he or she places on that good or service.

The argument that underlies contingent valuation, however, is that what people pay to purchase something does not necessarily reflect its total value to society - market prices do not necessarily reflect the value that individuals (or, by aggregation, society as a whole) place on some things. A simple example would be where a person values a dramatic view of a mountain. As it is not possible to sell the view, however, there is no market price and so no market valuation of what the view is worth to that person. The Menie dunes are clearly another example of this type of natural asset.

This problem arises because the mountain view is what is known as “non-excludable” – it is either not technically possible or it is prohibitively costly to prevent anyone from appreciating a particular piece of scenery. Since people cannot be prevented from consuming it, it is not possible for a company to supply it hence there is no market and no price for the asset.

Contingent valuation argues that market prices reflect only what are termed “use values”<sup>24</sup>. Use values reflect what people will pay to actually consume (“use”) something such as a bus journey. However, natural resource assets may also generate so-called non-use values, where people value something even if they do not actually consume it themselves. Non-use values arise because people may value an aspect of some goods that cannot be bought or sold through markets for the reasons discussed above. For example, people may not actually visit a natural asset but may still be willing to pay to have it preserved for the following reasons<sup>25</sup>:

- Existence value – they may feel that the site is worth conserving for its own sake;
- Option value – people may want to leave open the possibility that they will visit the site in the future;
- Bequest values – there may be a desire for the site to be preserved for future generations.

The technique thus attempts to estimate the total value of an activity to society by estimating both use and non-use values.

Information on the amount that people in Scotland would spend to preserve the Menie dunes would thus allow us to weigh the known value that the Trump development will contribute to the Scottish economy - the amount of GVA created at Menie - against the value that people in Scotland place on preservation of the dunes. The Trump development is a classic example of how economic development may conflict with a desire to protect the environment. Given an increased interest in environmental issues, conflicts of this nature are likely to occur again and it would be useful if these type of economic valuation techniques were applied more widely in the future.

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### Endnotes

<sup>1</sup> The decision to refuse the application was taken by the Council’s Infrastructure and Services Committee.

<sup>2</sup> See the precognition to the Menie enquiry by Councillor Martin Ford.

<sup>3</sup> “The Economic Impact of the Menie Estate Development on the Scottish and local economy”, Fraser of Allander Institute, 2008.

<sup>4</sup> Equivalent to the development’s contribution to Gross Domestic Product (GDP)

<sup>5</sup> The local economy is defined here as the area covered by Aberdeen City Council and Aberdeenshire Council.

<sup>6</sup> Construction and operational cost estimates for the Menie development were provided by Johnston Carmichael on behalf of TIGLS.

<sup>7</sup> See English Partnerships, *Additionality Guide*, 2004.

<sup>8</sup> North East Scotland Economic Research is run in partnership with Aberdeen City and Shire Economic Forum, a public and private sector economic partnership in the North East.

<sup>9</sup> “Economic Development Priorities to 2011”, Aberdeenshire Council.

<sup>10</sup> See the precognition to the Menie enquiry by Aberdeen and Grampian Chamber of Commerce,

<sup>11</sup> See “Profile of Scottish Tourism-Related Sector”, Scottish Government, September 2007.

<sup>12</sup> Scottish Government (2006).

<sup>13</sup> Scottish Natural Heritage (SNH) is the official Scottish designating body.

<sup>14</sup> See “Sites of Special Scientific Interest”, Scottish Natural Heritage website.

<sup>15</sup> Aberdeenshire Local Plan, Chapter 3, “Environment”, page 12.

<sup>16</sup>See “Trump rejection would be tragic”, BBC News website, North East Scotland, 4<sup>th</sup> July 2008.

<sup>17</sup>Menie Enquiry, Closing submission, Scottish Natural Heritage.

<sup>18</sup>Dr Martin Hawtree.

<sup>19</sup>Martin Hawtree’s precognition to Menie Enquiry, page 3.

<sup>20</sup>TIGLS, Final Submission to Menie Enquiry, page 13.

<sup>21</sup>See, for example, “Choosing our future: Scotland’s sustainable development strategy”, Scottish Government 2005.

<sup>22</sup>Ibid, p 43.

<sup>23</sup>“Seas the Opportunity”, Scottish Government 2005. The quotation is from page 9.

<sup>24</sup> See, for example, Santagata, W and Signorello, G. (1998), “Contingent Valuation and Cultural Policy Design: The Case of ‘Napoli Musei Aperti’”, *Journal of Cultural Economics*, Vol. 24 , pp 181-204

<sup>25</sup>See “Why Value Cultural Heritage?” Ready, R and Navrud, S, in “Valuing Cultural Heritage”, Ready and Navrud (Eds.), Edward Elgar, 2002.

# Inside the Scottish workplace: employee perspectives from the 2004 Workplace Employment Relations Survey<sup>1</sup>

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Employee perspectives of their jobs, their managers and management-employee relationships at their places of work are important for two reasons. First, they help explain the current behaviour of some workers, such as lateness, absenteeism, or shirking on the job, all contributing to low worker productivity. Secondly, they help predict the future behaviour of all workers, notably their likelihood of quitting their present job.

This paper reports research which examined five sets of perspectives of workers employed at workplaces located in Scotland viz. (i.) about their jobs, and the various demands these jobs make on them; (ii.) about the influence they have over various facets of their jobs, their task discretion; (iii.) about the satisfaction they derive from several aspects of their jobs; (iv.) about their managers at their places of work; and (v.) about management-employee relationships, again at their places of work.<sup>2</sup>

The research made use of matched workplace-employee data sets which had their origin in two surveys associated with the 2004 Workplace Employment Relations Survey (WERS 2004) viz. the survey of managers and the survey of employees (Kersley et al, 2006). The initial unit of analysis in WERS 2004 is the workplace, defined as the activities of a single employer at a single set of premises. At each participating workplace, the manager with day to day responsibilities for employment was interviewed, and this constitutes the survey of managers. At each workplace which participated in the survey of managers, self completion questionnaires were distributed to a random selection of up to 25 employees, and this constitutes the survey of employees.

This paper has three aims. First, to report responses to questions of relevance in the survey of employees. For example reporting how many employees agree with the statement that 'my job requires that I work very hard'?: how many are satisfied with the sense of achievement they get

from their jobs?: and how many would describe management-employee relations where they work as 'good'? Responses to these questions vary, between individuals and across places of work. The second aim is to report how these responses differ, for example according to individual personal characteristics and the characteristics of the workplaces at which the individual is employed.

The WERS 2004 survey is undertaken throughout Great Britain. Consequently, it is possible to compare the responses made by individuals employed at workplaces located in Scotland with their counterparts employed at workplaces located elsewhere in Great Britain. Accordingly, the third aim of the paper is to report the extent to which the perspectives of employees in Scottish based workplaces are 'different'. This final aim is especially important, following recent research by Bell and Blanchflower (2007) who argued that "the Scots are less happy and less satisfied with life than is the case for the British population as a whole" (p. 189).

The remainder of this paper is in four substantive sections. The following section provides a descriptive overview of employee responses to ten questions used to examine the five sets of perspectives identified above. Then important, illustrative examples are provided of how responses to these questions differ, according to individual personal characteristics, such as age, gender, training received, and the characteristics of the workplace at which the individual is employed, especially whether or not it is a single establishment organisation. Differences in perspectives between those employed at workplaces located in Scotland and those employed at workplaces located elsewhere in Great Britain are then reported. The final section addresses some policy implications which arise from the principal conclusions of the research.

## The work-related perspectives of employees in Scotland

The work-related perspectives of individuals employed in workplaces located in Scotland are reported, by question posed in the WERS 2004 survey of employees, in Tables 1 through to 10. (The perspectives of those employed in workplaces located elsewhere in Great Britain are given in parentheses.)

Although most employees agree that their jobs require them to work very hard, most feel that their jobs are secure and very few worry a lot about their jobs outside working hours (Table 1). The majority feel that their jobs make them feel 'tense', 'worried' and 'uneasy' 'occasionally' or 'some of the time' (Table 2). On the other hand, approximately one individual in four feels that his/her job makes him/her feel 'calm', 'relaxed' and 'content' 'most of the time' (Table 3).

One employee in three claims to have 'a lot' of influence over what tasks he/she does and the pace at which he/she

works. Almost one in two claims to have 'a lot' of influence over how he/she does the work and the order in which work is carried out. However, over one in three has no control over his/her start/finishing times (Table 4).

Most employees are satisfied with most aspects of their work, for example the sense of achievement got from it; and the scope it offers to make use of their own initiative. Where less satisfaction is to be found, it is in the context of the training received and, most especially, the pay received (Table 5).

Although more employees consider their managers to be 'good' rather than 'poor' at informing them about issues such as changes in the way the organisation is being run or changes in the way in which the job is to be done, nonetheless a sizeable minority feel otherwise (Table 6). Similar response outcomes are to be seen in the context of statements such as: agreeing that their managers can be relied upon to keep their promises; deal with their employees fairly; and are understanding about their out of work responsibilities (Table 7).

More employees agree than disagree with the statement that their managers are 'good' at seeking the views of themselves or their representatives or responding to suggestions from the same. However, more disagree than agree with the statement that their workplace managers are 'good' at allowing themselves or their representatives to influence final decisions (Table 8). This latter result is reflected in Table 9, which reports percentage responses to the question about employee satisfaction with the amount of involvement in decision-making. Nonetheless, the majority maintain that relations between managers and employees at their places of work are 'good' (Table 10).

### **Some differences in the work-related perspectives of employees in Scotland**

Responses to the questions/statements from the survey of employees constitute the dependent variables in the estimations undertaken to examine the determinants of differences in the work-related perspectives identified. These responses are multiple, nominal and, sometimes, ordered. Consequently, as appropriate, multinomial logit and ordered logit models are estimated. The vector of independent variables consists of responses to some further questions from the survey of employees together with responses to selected questions from the survey of managers. This vector, which remains constant throughout, irrespective of whether the model estimated is a multinomial logit or an ordered logit, consists of three distinct types of variables. The first type reflects an individual's personal characteristics, both unrelated to and related to the workplace at which he/she is employed (for example, age/gender and tenure, respectively); the second type reflects the structural characteristics of the workplace at which the individual is employed (such as its size, its corporate characteristics, its Standard Industrial Classification etc.); and the third type reflects some of the

human resource management policies and practices in operation at the workplace at which the individual is employed (such as whether the workplace is Investors in People accredited, whether it has an equal opportunities policy etc.)<sup>3</sup>

Variables proxying age, earnings and educational qualifications are positively correlated with most aspects of job satisfaction, with the older, those earning relatively more and those without educational qualifications being more likely to report that they derive satisfaction from their work. Moreover, the significance of these same three variables extends further into some of the other perspectives examined, although the nature of their impact there differs. For example, whereas those in the older age categories and those without educational qualifications are correlated with positive feelings about their work – such as being relaxed and content – those in the higher earnings categories are correlated with agreeing with statements such as their jobs require them to work very hard and worrying a lot about their jobs outside working hours.

Women are more likely than men to report job satisfaction across its several aspects. Gender, however, proves to be of little significance in the context of the other four sets of perspectives examined.

The amount of training received in the past 12 months is the most important of all the variables designed to depict an individual's job related characteristics in explaining the different perspectives held. Those who have had between two and five days or more training in the past year, relative to those who have had no training whatsoever, do report some negative perspectives. For example, their jobs require them to work very hard; they never have enough time to get their jobs finished; and they tend to worry a lot about their jobs outside of working hours. More generally, however, their perspectives are positive, again relative to those who have had no training, not only about matters pertaining to their own jobs, but also about managers at their places of work. To illustrate: they are more likely to have more influence over all facets of job influence examined; they are more likely to derive satisfaction from six of the seven aspects examined – the exception is pay received; they are more positive about their workplace managers and of management-employee relationships at their places of work, notably so on matters relating to their involvement in decision-making.

A feature of previous studies of individuals at their places of work is the identification of what Noon and Hoque (2001) refer to as "the persistence of unequal treatment at work" (p. 105). Despite legislation post 1998 which seeks to address and remedy much of this, the research presents evidence of continuing perceptions of inequality on the part of some members of the workforce, notably those who are disabled; those who are not 'white'; and those who are working on part time/fixed term/temporary contracts of employment.

When compared to those who report no disability, those with some form of disability are less likely to consider their jobs to be secure; are more likely to feel tense; and less likely to feel calm. They are less likely to be satisfied with the jobs they do and the pay they get from doing them. They are less likely to agree with the statement that managers treat their employees fairly.

When compared to those who are white, individuals who are not white are more likely to be dissatisfied with the scope they have to make use of their own initiative; the influence they have over their jobs; the training they receive; and their pay. They are less likely to be satisfied with the work itself. Furthermore, individuals who are not white are more likely to consider their managers to be poor at seeking the views of employees or their representatives; and to be poor at allowing either to have some influence on decision-making. They are also more likely to be dissatisfied with their own involvement in decision-making.

When compared to those working on 'normal' full time contracts of employment, those with temporary contracts are less likely to feel that their jobs are secure, sentiments shared with those on fixed term contracts. Additionally, they are more likely to be dissatisfied with the sense of achievement they get from their jobs; and are more likely to be dissatisfied with the scope they have to make use of their own initiative, sentiments also held by those on fixed term contracts. Finally, those on temporary contracts are more likely to disagree with the statement that managers treat their employees fairly; and they are less likely to agree that management-employee relations at their places of work are good.

Variables depicting the structural characteristics of the workplace at which the individual is employed are not without some consequence, notably so for the variables associated with single/multi-workplace nature of the organisation. Relative to those employed at single plant organisations, individuals employed at workplaces which are part of multi-workplace organisations are less likely to be satisfied with their job security. Also, they are more likely to be dissatisfied with matters relating to the scope they have to make use of their own initiative and their pay.

Perhaps most important of all, however, is their indictment of managers at their places of work. Again relative to those employed at single plant organisations, individuals employed at workplaces which are part of multi-workplace organisations are more likely to disagree with such statements as: managers keep their word; managers are sincere when attempting to understand employees' views; managers deal with employees honestly; and managers are understanding about employees' out of work responsibilities. This carries over into their perspectives of management-employee relations at their place of work, where individuals employed at workplaces which are part of multi-workplace organisations are critical of their (lack of)

involvement in decision-making and consider management-employee relations to be poor.

### **Differences between the perspectives of individuals employed in workplaces located in Scotland and those employed in workplaces located elsewhere in Great Britain**

The work-related perspectives of individuals employed in workplaces located outwith Scotland, i.e. elsewhere in Great Britain, are reported in parentheses, by question posed in the WERS 2004 survey of employees, in Tables 1 through to 10. Casual observation of these tables suggests little difference between their perspectives and those of their counterparts employed in workplaces located in Scotland.<sup>4</sup>

However, replicating the original multinomial logit and ordered logit estimations, this time making use of the full data set and incorporating a dummy variable to distinguish between 'Scotland' and the 'Rest of Great Britain', makes it possible to examine for possible differences controlling for the other factors included in the vector of independent variables in the models. In the 37 estimations associated with the original analysis, there are only three instances in which there is a statistically significant (i.e. at a 95 percent confidence level) difference between the two groups of workers. Only one of these is a matter of some substance viz. satisfaction with pay received.<sup>5</sup> In the context of this aspect of job satisfaction, individuals employed at workplaces located elsewhere in Great Britain are less likely to be satisfied with the pay they receive, relative, that is, to their counterparts employed in Scottish based workplaces.

These effectively negligible differences in work-related perspectives between workers employed at workplaces located in Scotland and those employed at workplaces located elsewhere in Great Britain contrast markedly with the research findings of Bell and Blanchflower (2007). Analysing a diverse set of data bases to examine an equally diverse range of objective and subjective indicators of health, welfare and well-being, Bell and Blanchflower paint "a relatively depressing picture of Scotland" (p. 192) in which Scotland consistently compares unfavourably with, for example, the rest of Great Britain. Bell and Blanchflower conclude that: "Economic factors are likely only to make a difference at the margin to these welfare outcomes." (p. 192). As a consequence, they question the high priority accorded to the policy objective of economic growth on the part of the Scottish Executive (as was), advocating that higher priority be given instead to more 'social' and 'health' orientated policies.<sup>6</sup>

### **Some policy implications of the research**

This paper has reported research which examined five sets of work-related perspectives of individuals employed at

workplaces located in Scotland. Three results are particularly noteworthy, each with policy significance.

Training is found to be correlated with positive outcomes, relating both to an individual's personal job satisfaction and well-being at work and his/her perspective of managers and management-employee relations at his/her place of work. Training is integral to the battery of organisational policies associated with high commitment management, a strategy advocated because of its putative positive impact upon organisational performance (Walton, 1985). It is inappropriate to presume causation where no evidence of such exists. Training may not necessarily engender commitment which, in its turn, may not necessarily enhance organisational performance. Nonetheless, this research offers further supportive evidence of the apparent benefits to both individuals and organisations which may accrue from investments in human capital.

Perceptions of workplace inequalities exist on the part of minority groups. This does not necessarily imply that existing policies, towards equal opportunities and flexible working, for example, are not working. There may be problems of policy compliance. However, there may be also some requirement to strengthen existing policies of relevance.

Contrary to the "relatively depressing picture of Scotland" presented by Bell and Blanchflower (2007, p. 192), there is very little difference in the work-related perspectives examined between those employed at workplaces located in Scotland and their counterparts employed elsewhere within Great Britain. Moreover, in the single instance of substance where a difference is found, it is not those employed within Scotland who voice their dissatisfaction. In their assessment of policy requirements given the manifold problems which Bell and Blanchflower examine, they treat employment policy with some disdain, favouring instead more socially orientated strategies. However, given the findings of the research reported in this paper, perhaps the potential of appropriate employment policies is due more credit than they give. Although not necessarily reducing or eliminating individual differences in well-being at work, being employed would appear to eliminate many of the spatial differences in well-being they observe.

## Endnotes

<sup>1</sup>The author acknowledges the (former) Department of Trade and Industry, the Economic and Social Research Council, the Advisory, Conciliation and Arbitration Service and the Policy Studies Institute as the originators of the 2004 Workplace Employment Relations Survey data, and the Data Archive at the University of Essex as the distributor of the data. The National Centre for Social Research was commissioned to conduct the field work on behalf of the sponsors. None of these organisations bears any responsibility for the author's analysis and interpretations of the data.

<sup>2</sup>The research is reported in full in the Centre for Public Policy for Regions (CPPR) Working Paper No. 15, available from the CPPR website ([www.cppr.ac.uk](http://www.cppr.ac.uk)).

<sup>3</sup>Full details of these independent variables, most incorporated for purposes of control, are available from the original working paper. The estimating assumption is that these variables are exogenous, an assumption frequently made in other comparable estimations (e.g. Bell and Blanchflower,

<sup>4</sup>By way of a preliminary examination of the data set to test for possible statistical associations between the two sets of variables of relevance, each question/statement response was cross tabulated by the 'Scotland' – 'Rest of Great Britain' dummy variables. Pearson chi-square statistics established a statistically significant association (at  $p < 0.05$ ) between the 'Scotland' and 'Rest of Great Britain' dummy variables and responses to the following questions: "thinking about the past few weeks, how much of the time has your job made you feel 'relaxed' "? ( $p = 0.031$ ): "in general, how much influence do you have over 'the order in which you carry out tasks' "? ( $p = 0.035$ ): "how satisfied are you with 'the scope for using your own initiative' "? ( $p = 0.029$ ): "how satisfied are you with 'the amount of influence you have over your job' "? ( $p = 0.028$ ): and "how satisfied are you with 'the amount of pay you receive' "? ( $p = 0.001$ ). Again, see the original working paper for fuller details. 2007).

<sup>5</sup>The other two instances relate to worrying a lot about the job outside working hours and influence over starting and finishing times.

<sup>6</sup>The priority accorded to economic growth has not changed, despite the regime change in the Scottish Parliament and the presence, now, of a Scottish National Party 'Scottish Government' (Scottish Government, 2007).

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**Table 1: Perspectives about the job (A)**

Question: Do you agree or disagree with the following statement about your job: (net percentage agreement scores) (Rest of Great Britain (GB) in parentheses)

Statement	Percent
My work requires that I work very hard	72.46 (71.46)
I never seem to have enough time to get my work done	15.23 (15.17)
I feel that my job is secure in this workplace	49.17 (47.08)
I worry a lot about my work outside working hours	-20.71 (-21.62)
Number of observations	1,202 (9,453)

**Note:** The 'net percentage agreement score' is obtained by subtracting the percentage who disagree with the statement from the percentage who agree with the statement.

**Table 2: Perspectives about the job (B)**

Question: Thinking about the past few weeks, how much of the time has your job made you feel 'Tense', 'Worried', 'Uneasy' (percent of time): (Rest of GB in parentheses):

Response (Percent)\Feeling	Tense	Worried	Uneasy
Never	11.90 (9.88)	19.38 (18.14)	26.12 (27.30)
Occasionally	26.46 (27.42)	31.28 (32.19)	34.78 (33.21)
Some of the time	43.09 (43.88)	38.60 (37.66)	31.20 (29.47)
Most of the time	15.81 (15.51)	9.15 (9.99)	6.14 (8.08)
All of the time	2.75 (3.31)	1.58 (2.02)	1.50 (1.94)
Number of observations	1,202 (9,453)		

**Table 3: Perspectives about the job (C)**

Question: Thinking about the past few weeks, how much of the time has your job made you feel 'Calm', 'Relaxed', 'Content' (percent of the time): (Rest of GB in parentheses):

Response (Percent)\Feeling	Calm	Relaxed	Content
Never	12.40 (10.48)	20.05 (9.95)	12.06 (10.47)
Occasionally	27.29 (28.59)	30.28 (30.74)	23.29 (22.62)
Some of the time	29.45 (30.05)	24.29 (27.97)	28.95 (30.56)
Most of the time	28.89 (28.57)	23.71 (21.45)	32.95 (32.50)
All of the time	2.00 (2.30)	1.66 (1.88)	2.75 (3.85)
Number of observations	1,202 (9,453)		

**Table 4: Perspectives about influence over facets of the job**

Question: In general, how much influence do you have over the following, (Percent) (Rest of GB in parentheses):

Facet\Response (Percent)	None	A Little	Some	A Lot	Total
What tasks you do	12.15 (10.57)	15.14 (14.45)	38.19 (34.53)	34.53 (35.53)	1,202 (9,453)
The pace at which you work	11.23 (10.94)	15.81 (15.35)	38.02 (35.96)	34.94 (37.76)	1,202 (9,453)
How you do your work	4.49 (3.65)	11.23 (10.90)	35.27 (34.38)	48.00 (51.07)	1,202 (9,453)
The order in which you carry out tasks	6.74 (5.18)	9.48 (11.05)	35.27 (33.66)	48.50 (50.10)	1,202 (9,453)
The time you start or finish work	37.35 (33.70)	14.98 (16.04)	22.05 (24.10)	25.62 (26.16)	1,202 (9,453)

**Table 5: Perspectives about the satisfaction derived from aspects of the job**

*Question: How satisfied are you with the following, (percent) (net percentage satisfaction scores) (Rest of GB in parentheses):*

Aspect	Percent
The sense of achievement you get from your work	55.57 (60.12)
The scope for using your own initiative	56.99 (61.93)
The amount of influence you have over your job	38.11 (44.10)
The training you receive	21.88 (25.13)
The amount of pay you receive	0.42 (-7.08)
Your job security	48.17 (46.20)
The work itself	58.49 (61.97)
Number of observations	1,202 (9,453)

**Note:** The 'net percentage satisfaction score' is obtained by subtracting the percentage who are dissatisfied with the aspect in question from the percentage who are satisfied.

**Table 6: Perspectives about management**

*Question: In general, how good would you say managers at this workplace are at keeping employees informed about: (percent) (net percentage 'good' scores) (Rest of GB in parentheses):*

Issue	Percent
Changes to the way the organisation is being run	23.21 (23.67)
Changes in staffing	13.15 (15.73)
Changes in the way you do your job	26.54 (26.00)
Financial matters, including budgets and profits	4.74 (9.54)
Number of observations	1,202 (9,453)

**Note:** The 'net percentage good score' is obtained by subtracting the percentage who report management are good with the issue in question from the percentage who report that management are poor.

**Table 7: Perspectives about management**

*Question: Thinking about the managers at this workplace, to what extent do you agree or disagree that they: (percent) (net percentage 'agreement' scores) (Rest of GB in parentheses):*

Issue	Percent
Can be relied upon to keep their promise	19.47 (17.89)
Are sincere in attempting to understand employees' Views	25.54 (27.67)
Deal with employees honestly	29.62 (30.86)
Understand about employees having to meet responsibilities outside work	35.85 (36.23)
Encourage people to develop their skills	38.85 (38.88)
Treat employees fairly	32.53 (32.09)
Number of observations	1,202 (9,453)

**Note:** The 'net percentage agreement score' is obtained by subtracting the percentage who disagree with the statement from the percentage who agree with the statement.

**Table 8: Perspectives about management-employee relations (A)**

*Question: Overall, how good would you say managers at this workplace are at: (percent), (net percentage 'good' scores) (Rest of GB in parentheses):*

Issue	Percent
Seeking the views of employees or employee Representatives	15.97 (15.99)
Responding to suggestions from employees or employee representatives	9.23 (9.84)
Allowing employees or employee representatives to influence final decisions	-10.24 (-7.69)
Number of observations	1,202 (9,453)

Note: The 'net percentage good score' is obtained by subtracting the percentage who report management are good at the issue in question from the percentage who report that management are poor.

**Table 9: Perspectives about management-employee relations (B)**

*Question: Overall, how satisfied are you with the amount of involvement you have in decision-making at this workplace? (percent) (Rest of GB in parentheses):*

Response	Percent
Dissatisfied	25.12 (23.57)
Neither dissatisfied nor satisfied	37.10 (37.12)
Satisfied	37.77 (39.23)
Number of observations	1,202 (9,453)

**Table 10: Perspectives about management-employee relations (C)**

*Question: In general, how would you describe relations between managers and employees here? (percent) (Rest of GB in parentheses):*

Response	Percent
Poor	18.05 (16.59)
Neither poor nor good	26.21 (24.85)
Good	55.74 (68.55)
Number of observations	1,202 (9,453)

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